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Edward Sang's steps for the construction of the logarithms of the primes (K1-K3)

Denis Roegel

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Edward Sang's steps
for the construction
of the logarithms of the primes
(K1-K3)

Denis Roegel

11 january 2021

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1 Introduction

Edward Sang (1805–1890) was probably the greatest calculator of logarithms of the 19th century [3, 11, 12, 13, 22, 27]. Sang spent 40 years computing tables of logarithms and trigonometric functions, with the assistance from his daughters Flora (1838-1925) and Jane (1834-1878). The result fills about 50 manuscript volumes, plus a number of transfer duplicates, which are kept at Edinburgh University Library and at the National Library of Scotland, Edinburgh. I have reconstructed a number of these tables and an overview of the tables and reconstructions can be found in a separate guide [34].

Sang’s purpose was in particular to provide fundamental tables, including for the decimal division of the quadrant. In 1890 [3, p. 189], he wrote that

In addition to the results being accurate to a degree far beyond what can ever be needed in practical matters, [the collection of computations] contains what no work of the kind has contained before, a complete and clear record of all the steps by which those results were reached. Thus we are enabled at once to verify, or if necessary, to correct the record, so making it a standard for all time.

For these reasons it is proposed that the entire collection be acquired by, and preserved in, some official library, so as to be accessible to all interested in such matters; so that future computers may be enabled to extend the work without the need of recomputing what has been already done; and also so that those extracts which are judged to be expedient may be published.

The present document describes volumes K1, K2 and K3 which contain the steps used for the construction of the logarithms of the primes.¹ The three volumes have a continuous page numbering.

2 Volume 1 (K1)

Volume 1 (up to page 240) gives the logarithms of the primes up to 2000, as well as a few others. It starts with an introductory notice by Sang.

¹**Important note to future researchers:** This document, as well as others related to the reconstruction of Sang’s tables, contains some shortcomings, some of which can easily be completed by others. Known shortcomings are marked in the margins with the sign “✱”. Please, let me know of your work so that I can improve mine.

2.1 Sang's introduction

I reproduce here Sang's notice as it appears at the beginning of volume 1 (K1, Acc 10780/16). This introduction covers pages 3-11 and 13. There is no page 12 and it is not missing.

Notice.

The following calculations were undertaken with the ultimate view of forming a nine place table of the logarithms of all numbers under a million: a table which is desired by a gradually increasing number of computers

The ordinary seven place tables suffice perfectly for all the ordinary work of geodetical and astronomical calculation; and, with management, for a great part of the more delicate computations; but few who have ever engaged in the toil of computing original tables have failed to become sensible of the facilities which a more extended logarithmic canon would afford them.

The rapidly increasing exactitude of astronomical data, the delicacy of modern instruments and the improvements in all branches of applicate mathematics, promise soon to render such tables not merely desirable but absolutely requisite to original computers. At the same time we must admit that for many, very many, years the demand for such an extensive work must fall sadly short of repaying the labour and expense attending its construction.

In order to obtain the last digits true it is necessary to carry the manuscript calculations several places further, and afterwards to cut off the additional places augmenting the last retained figure whenever those rejected exceed 50000. . . . Here however it may happen that we have to do with 4999. . . 998 or 5000. . . 002 and as there must always be an uncertainty of two or three units in the last computed place, it follows that there is then an uncertainty in the last retained one. Now among a million numbers the probability is that if we carry the entire figures to six places, each of these may occur once:² so that if we make the manuscript calculation to fifteen places we may anticipate five or six cases of uncertainty. Were we to carry the work to one or two places more the chance

²Sang means that each of the sequences 499998, 499999, 500000, 500001, and 500002 has a probability of occurring once among a million random decimal numbers. If the computations are extended to seven places, then the probability of one of the 7-digit sequences 4999998, 4999999, etc., occurring, is 0.1.

of having an uncertainty would be almost nothing: but for each such place we shall have a million of figures in the logarithms and another couple of millions in the first and second differences — the mere writing out of which implies time and toil. Hence it will be more economical to rest at the fifteenth place, and to make a special calculation for each doubt that arises.

To reduce the probability of error to two or three units in the last place, that is in the fifteenth we must carry the logarithms of the smaller primes a few steps further, since by repeated additions their defects or excesses are multiplied: on this account I determined to compute as far as ten thousand to twenty-five places; up to one-hundred thousand to twenty places, and latterly to restrict the million table to fifteen. In projecting such a mass of work, more than any single man can hope to accomplish, it was natural to turn to the 60 place table printed in Callet's *Tables Portatives*,³ and in the earlier editions of Hutton. But it at once appeared that no sufficient account of the computation of this table is given and that errors may have existed in it without any likelihood of detection: while these errors would become excessively entangled in any after-work founded upon them, I therefore rejected the idea of trusting to the sixty place table and resolved to commence at the very beginning. However I judged it sufficient to compute the logarithms of the primes given by Callet only once, accepting the coincidence as sufficient proof of accuracy: and here I gladly bear testimony to the value of Callet's table in this far that to twenty-seven places I have found it exact; in the twenty-eighth place, which is the limit of the following manuscript work, small and to-be-looked-for deviations occurred: the figures in Callet were then adopted in preference to my own.

After passing 1100 it became necessary to compute the logarithm of each prime by two independent methods and to ferret out the source of any discrepancy: nor was ever any uncertainty left except that unavoidable in the last place.

Having given this short account of the general object and management of the work, I may now proceed to describe more in detail the actual mode of procedure.

³In fact, Callet's tables [10] (published in 1795) contain a table giving the 11th to 61st decimals of the logarithms of primes up to 1097. This table may have been copied from Hutton [20], but both tables actually were first published by Sharp in 1706 [70].

Throughout the whole operation our object is to obtain the greatest number of useful results from a given amount of labour: and it is in this respect alone that any particular notice has to be taken of our procedure since the general principles of the calculation are simple and perfectly well known to every algebraist.

Merely for the sake of completeness the first pages are devoted to the computation of the neperian logarithm of 10, and this is accomplished by means of the single divisor 9, thus

$$3 \text{ nep. log } \frac{1 + \frac{1}{3}}{1 - \frac{1}{3}} = \text{ nep. log } 8 = 2 \left\{ 1 + \frac{1}{3} \cdot \frac{1}{9} + \frac{1}{5} \cdot \frac{1}{9^2} + \frac{1}{7} \cdot \frac{1}{9^3} + \text{etc.} \right\}$$

$$\text{ nep. log } \frac{1 + \frac{1}{9}}{1 - \frac{1}{9}} = \text{ nep. log } \frac{10}{8} = 2 \left\{ \frac{1}{9} + \frac{1}{3} \cdot \frac{1}{9^3} + \text{etc.} \right\}$$

whence

$$\text{ nep. log } 10 = 2 + \frac{2}{9} \left(1 + \frac{1}{3} \right) + \frac{2}{9^2} \left(\frac{1}{5} \right) + \frac{2}{9^3} \left(\frac{1}{3} + \frac{1}{7} \right) + \frac{2}{9^4} \left(\frac{1}{9} \right) + \text{etc.}$$

whence the well known values of nep. log 10 and of M at once result.

The basis being thus laid, the calculation thereafter proceeds much in the usual way, the computation of $\overline{\log n + 1}$ and $\overline{\log n - 1}$ being generally combined in the earlier part: but in the more advanced part of the work where the divisors of that one with which our immediate business does not lie, are of difficult discovery, that computation is omitted. A list, however, of all divisors that have been used was regularly kept so that it might readily recur to: a precaution which the numerous "see p. so and so" sufficiently show to be advantageous.

From the arrangement of the earlier part of the work, it necessarily happened that the logarithms thus found belonged to primes out of order, and sometimes even beyond the intended range of the table: in the latter case a list was kept of the extra primes thus found. Sometimes also it occurred that the number whose logarithm was found was a composite number none of whose factors had yet been happened upon: of these also a list was kept that they might be employed as occasion required.

The great matter at all times was to obtain some multiple of the prime in hand which might differ by unit from some large

number whose logarithm is already known; at the same time that the division by this number is easily performed. Now when any number is terminated by a succession of cyphers the division by it is so much facilitated, hence it is desirable to find those multiples of the prime which end in ...999 or in ...001. The operation for this purpose will be best understood from a specimen.

Suppose that we wish to compute the logarithm of the prime number 1619. Of this the first multiple ends in 9: now its penult is 1 wherefore if we add that multiple which ends in 80, that is the twentieth, we shall have a multiple ending in 99; in fact $21 \times 1619 = 33999$. As the antepenult is also 9, the third figure of the multiplier must be 0 while to bring the next figure 3 up to 9 we must add the fourth multiple. The work is arranged as under

$$\begin{array}{r}
 1 \\
 2 \\
 \hline
 21 \\
 40 \\
 \hline
 4021 \\
 1 \\
 7 \\
 6 \\
 7 \\
 \hline
 76714021
 \end{array}
 \qquad
 \begin{array}{r}
 1619 \\
 3238 \\
 \hline
 33999 \\
 6476 \\
 \hline
 6509999 \\
 1619 \\
 11333 \\
 9714 \\
 11333 \\
 \hline
 124199999999
 \end{array}$$

In a way exactly similar those multiples which end in ...001 may be found, but it is manifest that the two sets of multipliers are complementary to each other⁴ whence we conclude that $23\,285\,979 \times 1619 = 37\,700\,000\,001$.

From the very nature of the operation it follows that the number preceding the cyphers or the nines is less than the proposed prime,⁵ so that its logarithm may be assumed as known: there is then no trouble on this score: but it remains for us to decompose the multiplier.

⁴We have $100\,000\,000 - 76\,714\,021 = 23\,285\,979$.

⁵In the above example, 1241 is smaller than 1619, because the product of 1619 by a 8-digit integer necessarily is smaller than 1619×10^8 . And since $377 = 1619 - 1241 - 1$, the number preceding the 0s is also smaller than the proposed prime.

For effecting this decomposition I have had habitual recourse to Burckhardt's Table des Diviseurs which goes a little above three millions.⁶

The number 76 714 021 is however far beyond the limits of Burckhardt. I therefore content myself with trying it by the easy primes 3, 7, 11, 13, 37, and as none of these are divisors I strike off the 7, and would try 6 714 021; but for the sake of obtaining as large numbers as possible I take first the complement 23 285 979 and on trial at once find it divisible by 9, the quotient being 2 587 331 which is within the range of Burckhardt: on turning to that work we find the divisor 167 but the quotient 15493 is prime: this multiple then will not suit us. Taking up the above 6 714 021 we find it resolved into $3 \cdot 1493 \cdot 1499$; so that in all $10\,869\,999\,999 = 3 \cdot 1493 \cdot 1499 \cdot 1619$.

Since we require two independent computations we must seek for another multiple. The next multiplier 3 285 979 is just beyond the table of divisors; it refuses the tests for 3, 7, 11, 13, 37; the labour of an independent examination for its factors might exceed the whole trouble of computing the logarithm and therefore I leave it to take up 714 021; this at once yields to division by 3, and gives $1\,155\,999\,999 = 3 \cdot 7 \cdot 11 \cdot 11 \cdot 281 \cdot 1619$. We have now obtained two numbers sufficiently large, from each of which we may deduce $\log 1619$; but on referring to the number 1499 we find that its two multiples are 2 249 999 and 748 001, the latter of which particularly is small;⁷ hence it would be preferable if we can find another convenient multiple of 1619, to compute the logarithm of that number previous to 1499. Now 285 979 is a prime number but $85\,979 = 127 \cdot 677$; whence $139\,200\,001 = 127 \cdot 677 \cdot 1619$.

I therefore decide on computing (as is done in p. 179)⁸ the logarithm of 1619 from the two equations⁹

$$\begin{aligned} 1\,155\,999\,999 &= 3 \cdot 7 \cdot 121 \cdot 281 \cdot 1619 \\ 139\,200\,001 &= 127 \cdot 677 \cdot 1619 \end{aligned}$$

⁶See [8].

⁷Here, Sang does not want to use the equation $748\,001 = 499 \cdot 1499$ for computing $\log 1499$, because 748 001 is too small. Instead, he prefers to compute $\log 1619$ from other primes, and compute $\log 1499$ from $\log 1619$.

⁸Sang did not give the page number, and only left a blank space to be filled. Page 179 does indeed contain this computation.

⁹In the second equation, Sang, or whoever copied the values, mistakenly wrote 139 000 000 instead of 139 200 001.

and thereafter¹⁰ that of 1499 from

$$10\,869\,999\,999 = 3 \cdot 1493 \cdot 1619 \cdot 1499$$

$$2\,249\,999 = 19 \cdot 79 \cdot 1499$$

Although the description of this process be somewhat prolix, the actual work is by no means tedious; the less so when a great number of products are prepared at once.

Sometimes it is impossible to find very large multiples, but in general when the multiple falls under one million I have tried, by changing the order of the primes to find a better: thus for 1669 we find¹¹ $106\,099\,999 = 151 \cdot 421 \cdot 1669$ and $952\,999 = 571 \cdot 1669$; but among those rejected there was one¹² containing the factor 8609, wherefore for the purpose of obtaining $\log 1669$ I seek the decomposable multiples of 8609: these are $8\,336\,000\,001 = 3 \cdot 343 \cdot 941 \cdot 8609$ and $587\,900\,001 = 3 \cdot 13 \cdot 17 \cdot 103 \cdot 8609$; but here it is to be remarked that 5879 is a prime whose logarithm is not yet found; wherefore we must yet farther derange the order. On trial we obtain $69\,300\,000\,001 = 31 \cdot 37 \cdot 43 \cdot 239 \cdot 5879$

$$\text{and } 48\,279\,999\,999 = 3 \cdot 7 \cdot 11 \cdot 73 \cdot 487 \cdot 5879$$

both of which are unobjectionable;¹³ whence, after having computed $\log 5879$, we readily obtain 8609, and thence again from the equation $272\,999\,999 = 19 \cdot 8609 \cdot 1669$, we get $\log 1669$.

These examples will serve to give an idea of those considerations which have influenced the choice of the particular order in which the primes have been taken: the general progress has been onwards in the order of magnitude, the deviations having been made for the sake of obtaining large divisors. The search for these little ameliorations proves a grateful variety in the midst of what otherwise would be a dreary monotony.

The logarithms of the primes were inserted in a table previously arranged solely for the prime numbers; and also in a complete table prepared up to 10 000: at the same time the logarithms of

¹⁰Pages 179–180.

¹¹Sang's manuscript wrote $106\,999\,999$ instead of $106\,099\,999$ and $951\,999$ instead of $952\,999$.

¹²This was the equation $272\,999\,999 = 19 \cdot 8609 \cdot 1669$ given below, and it was rejected because $\log 8609$ had not yet been computed.

¹³By that, Sang means that the left-hand values are sufficiently large, and that the computation of $\log 5879$ would not involve yet uncomputed logarithms.

their multiples were found by help of a few slips of paper on the edges of which the logarithms of the earlier natural numbers were written.

March 1854

This introduction is followed by a page indicating that

This work was begun in December 1848 at Constantinople on separate paper, from which such of it as had been done was copied, being revised at the same time, on the pages (afterwards bound into the present volume) in 1850. 1851, 1852, being often laid aside on account of other occupations, particularly the heavy calculations connected with the Theory of Wheel Teeth.¹⁴ The computation of the logarithms of all primes up to 2000, at the end of July 1865, was completed, and the pages bound together.

Edward Sang
26 January 1875

2.2 The need for special computations

In his introductory notice, Sang alludes to the logarithms which may be in doubt. The uncertainties on the logarithms to 15 places from 100000 to one million requiring special computations are in fact the following ones, where the figures ranging from 499995 to 500005 are marked in bold:

n	$\log n$
152037	5.181949291 499996 0645...
194854	5.289709325 500004 6387...
401819	5.604030468 499997 5625...
436059	5.639545254 500001 3023...
457585	5.660471779 499999 9770...
627943	5.797920223 499995 1054...
722523	5.858851676 499999 0265...
766146	5.884311538 499996 2014...
770450	5.886744459 500003 7970...
972218	5.987763657 500000 0360...

¹⁴See [52].

For these values of n , the uncertainties on the 15th place digits may cause the 9th place digits to be computed erroneously. In fact, Sang would have only considered those logarithms whose last six figures, on 15 places, lie between 499998 and 500002, and there are only four such cases, which is nearly the amount anticipated by Sang. Given that Sang only pushed his calculations up to 370000, it is possible that he didn't meet any of these uncertainties. On the other hand, a computation such as that of $\log 152037$ may have been off by two units in the 15th place, leading Sang to do a special computation. Assuming that the 15th place found by Sang is off by at most 3 units with respect to the exact figure, any one of the above cases may have triggered a recomputation, as any value between 499995 and 500005, assuming a ± 3 uncertainty, can fall in the range [499998–500002].

If on the other hand Sang had pushed the computation one digit further, he would only have had to consider at most two uncertainties, namely

n	$\log n$
457585	5.6604717794999999770...
972218	5.9877636575000000360...

but locating these two cases would have cost him the writing out of three million digits, and probably years of computations.

2.3 The first computations in volume 1

Figures 1 to 5 illustrate the computations in volume 1. For instance, page K1/6 (figure 1) starts with the computation of the expansion of $\log(1+x)$ with $x = 1/10$. The sums of the odd and even terms $P(x)$ and $N(x)$ are computed separately so that $\log(1+x) = P(x) - N(x)$. $P(x)$ is computed up to $Mx^{25}/25$ and $N(x)$ up to $Mx^{26}/26$, with $M = 1/\ln 10$. Consequently, Sang obtains $\log(11)$.

Then Sang computes $P(x) + N(x) = 1 - \log 9$, from which he deduces $\log(9)$, and then $\log 3 = \log 9/2$, as well as $\log(81) = 2 \log 9$.

Sang continues by considering $x = 1/80$ and using the value just computed of $\log 81$, he obtains $\log 80$. $P(x) + N(x)$ gives him $\log 79$.

From $\log 80$, Sang obtains $\log 2$. And from $\log 10$ and $\log 2$, Sang derives $\log 5$.

Then Sang can compute $\log 2400$, and taking $x = 1/2400$, he derives $\log 2399$ and $\log 2401 = \log(7^4)$, which leads to $\log 7$. And so on.

Construction.

$\text{put } x = \frac{1}{10}$ 6.

± 1	.04342	94481	90325	18276	51128	919
3	14	47648	27301	08394	25503	763
5		8685	88963	80650	36553	023
7		62	04206	88433	21689	664
9			48254	94243	36946	475
11			394	81316	53665	926
13			3	34072	67838	712
15				2895	29654	602
17				25	54673	423
19					22857	604
21					206	807
23						1888
25						17
<hr/>						
- 2	217	14724	09516	25913	82556	446
4	1	08573	62047	58129	56912	782
6		723	82413	65054	19712	752
8		5	42868	10237	90647	846
10			4342	94481	90325	183
12			36	19120	68252	710
14				31021	03442	166
16				271	43405	119
18				2	41274	712
20					2171	472
22						19741
24						181
26						2

Figure 1: An excerpt from volume K1. The upper part gives the 28-place values of Mx^n/n for $x = 1/10$ and odd values of n . The lower part gives the values of Mx^n/n for the even values of n .

Construction. 7.

±	.04357	50878	59450	08308	00720	823
-	218	24027	01225	04232	98721	112
11	1.04139	26851	58225	04075	01999	711
	.04575	74905	60675	12540	99441	935
9	.95424	25094	39324	87459	00558	065
	.47712	12547	19662	43729	50279	03255
81	1.90848	50188	78649	74918	01116	130

Hence putting $x = \frac{1}{80}$ we obtain

$M =$	.43429	44819	03251	82765	11289	19
1	.00542	86810	23790	64784	56391	115
2		6 78585	12797	38309	80704	889
3		8482	31409	96728	87258	811
4		106	02892	62459	11090	735
5		1	32536	15780	73888	634
6			1656	70197	25923	608
7			20	70877	46574	045
8				25885	96832	175
9				323	57460	402
10					4 04468	255
11					5055	853
12					63	198
13						790
14						10

Figure 2: An excerpt from volume K1 (cont'd). At the top, using $x = 1/10$, are the values of $P(x)$ and $N(x)$ and below $P(x) - N(x) + 1 = \log 11$. Below Sang gives the value of $P(x) + N(x)$ and then $\log 9$, $\log 3$ and $\log 81$. The values of Mx^n for $x = 1/80$ follow.

Construction. 8.

±	1,	.00542	86810	23790	64784	56391	115
	3,		2827	43803	32242	95752	937
	5,			26507	23156	14777	727
	7,			2	95839	63796	292
	9,				35	95273	378
	11,					459	623
	13,						61
<hr/>							
-	2	3	39292	56398	69154	90352	444
	4		26	50723	15614	77772	684
	6			276	11699	54320	601
	8				3235	74604	022
	10					40446	825
	12						5 266
	14						1
<hr/>							
±		.00542	89637	94104	16059	26451	133
-		3	39319	07397	99705	37501	843
<hr/>							
81		1.90848	50188	78649	74918	01116	130
$\frac{81}{80}$		.00539	50318	86706	16353	88949	290
<hr/>							
80		1.90308	99869	91943	58564	12166	840
$\frac{80}{79}$		.00546	28957	01502	15764	63952	976
<hr/>							
79		1.89762	70912	90441	42799	48213	864
	2	.30102	99956	63981	19521	37388	947
	5	.69897	00043	36018	80478	62611	053
<hr/>							
2400		3.38021	12417	11606	02293	62445	873

Figure 3: An excerpt from volume K1 (cont'd). At the top are the values of Mx^n/n for $x = 1/80$ and odd and even values of n . There follows $\log 81$, $P(x)$, $N(x)$ and their difference $\log(81/80)$, then $\log 80$, $P(x) + N(x) = \log(80/79)$, $\log 79$, $\log 2$, $\log 5$ and $\log 2400$.

Construction.

9.

The case $x = \frac{1}{240}$ (page 22) should have preceded this.

Let $x = \frac{1}{2400}$ then

$M =$	.43429	44819	03251	82765	11289	19
1		18	09560	34126	35492	81879 704
2			753	98347	55264	78867 450
3				31415	97814	69366 195
4				13	08999	08945 569
5					545	41628 727
6						22725 678
7						9 469
8						4
<hr/>						
\pm	.00018	09560	34126	35492	81879	704
			10471	99271	56455	398
				109	08325	745
					1	353
<hr/>						
$-$		376	99173	77632	39433	725
			3	27249	77236	392
					3787	613
<hr/>						
\pm	.00018	09560	44598	34873	46662	200
$-$		376	99177	04882	20457	730
<hr/>						
$\frac{2401}{2400}$	$+$	.00018	09183	45421	29991	26204 470
2400		3.38021	12417	11606	02293	62445 873
<hr/>						
$\frac{2399}{2400}$	$-$	.00018	09937	43775	39755	67119 930
2401		3.38039	21600	57027	32284	88650 343
<hr/>						
2399		3.38003	02479	67830	62537	95325 943
<hr/>						
7		.82509	80400	14256	83071	22162 586

Figure 4: An excerpt from volume K1 (cont'd). Now, Sang considers $x = 1/2400$ and gives the first values of Mx^n , then computes $P(x)$, $N(x)$ and their sum and difference. From this he obtains $\log 2401$ and $\log 2399$, as well as $\log 7$. In the margin, Sang remarks that he should first have considered $x = 1/240$.

<i>Construction.</i>								71.
62999	4.79933	36558	35665	29373	80127	703		
73	1.86332	28601	20455	90107	43869	004		
P. 863	2.93601	07957	15209	59266	36308	699		
<i>Let $x^{-1} = 630000$ then also</i>								
± 1,	.00000	06893	56320	48135	21073	827		
3,					57	89504	665	
- 2,				547	10819	08582	160	
4,							6892	
±	.00000	06893	56320	48193	10578	492		
-				547	10819	08589	052	
$\frac{630001}{630000}$	+ .00000	06893	55773	37374	01989	440		
630000	5.79934	05494	53581	70530	22720	651		
$\frac{629999}{630000}$	- .00000	06893	56867	59012	19167	544		
630001	5.79934	12388	09355	07904	24710	091		
67	1.82607	48027	00826	43414	91316	290		
9403	3.97326	64361	08528	64489	33393	801	A	
629999	5.79933	98600	96714	11518	03553	107		
37	1.56820	17240	66994	99680	84506	895		
17027	4.23113	81360	29719	11837	19046	212		
<i>Let $x^{-1} = 1800$ then</i>								
1,	.00024	12747	12168	27323	75839	605		
2,		1340	41506	76026	29097	689		
3,			74467	50375	57016	165		
4,				41	37083	54198	842	
5,					2298	37974	555	
6,						1	27687	
7,							70	
8,							938	
							39	

Figure 5: A further excerpt from volume K1 (cont'd). Here Sang considers the value $x = 1/630000$ from which he derives $\log 9403$ and $\log 17027$.

2.4 Lists of divisors and primes

On pages 226-229 of volume 1 (figure 6), Sang lists a number of “divisors” and their decompositions. What Sang calls “divisors” are those large values that will be decomposed into primes, although the divisions will actually be made with off-by-one such divisors. For instance, on page 226, the first “divisor” is 698 000 001 when in fact there will be a division by 698 000 000.

The “divisors” on these four pages seem to be those enabling the computation of logarithms of primes between 2000 and 10000, and they are given in the order of these primes. However, not all primes between 2000 and 10000 had their logarithms computed here.

Some of the divisors have references to the pages where they appear, but some of these references appear to be incorrect. For instance, for 2 199 999 999 a penciled note refers to page 103, but on page 103 one finds the decomposition of 21999. 2 199 999 999 actually appears on page 302. Some of these references may have been added later, perhaps by Knott.

On pages 229–230 (figure 7), Sang gives the list of large primes (beyond 10000) for which logarithms have been computed so far. The first prime in the list is 11579 whose logarithm was computed on page 104. The prime 17027 had its logarithm computed on page 71, as we saw earlier (figure 5). The last one in the list is 2 999 999 whose logarithm was computed on page 41. The pages 231-240 give a few more divisors. *

At the end of volume 1 (figure 8), Sang lists on 48 pages the primes from 2 to 10627 and gives the logarithms to 28 places for the primes 2 to 10037, as well as for 10091, 10333, 10393, 10559 and 10601.

Construction.

	698 000 001 = 3.127.911.2011	p. 251
	94 700 001 = 3.11.1427.2011	p. 242
1	340 000 001 = 9.97.761.2017	p. 242
	433 000 001 = 7.23.1319.2039	p. 270
1	498 000 001 = 419.1733.2063	1
1	870 000 001 = 593.1511.2087	
	114 900 001 = 29.1861.2129	
	111 299 999 = 29.1801.2131	
	417 000 001 = 121.1531.2251	p. 197
	929 000 001 = 3.107.1231.2351	
	67 300 001 = 23.1231.2377	p. 155
	494 999 999 = 13.17.929.2411	
	9 039 999 = 3.1163.2591	
	94 600 001 = 29.1259.2591	p. 175 ?
	181 000 001 = 7.13.743.2677	p. 161.
1	344 999 999 = 3.7.17.1399.2693	p. 247.
518	999 999 999 = 13.37.199.2003.2707	some
	41 299 999 = 13.1171.2713	
2	199 999 999 = 3.173.1559.2719	p. 103
2	239 999 999 = 877.977.2731	
2	410 000 001 = 743.1163.2789	p. 125
	455 999 999 = 7.13.1789.2801	
6	589 999 999 = 11.227.911.2897	
	795 999 999 = 3.67.1367.2897	
	184 000 001 = 37.1699.2927	
1	207 999 999 = 251.1621.2969	
	880 999 999 = 11.19.1321.3191	
1	995 000 001 = 311.1999.3209	

Figure 6: Equations that were used for computing the logarithms of primes above 2000.

Construction. 229.

$98\ 999\ 999 = 7.1487.9511$ p. 110

$805\ 000\ 001 = 3.19.1429.9883$ p. 17⁽²⁵⁾

$2 \cdot 10^{12} + 1 = 2677 + 747\ 067\ 613?$

$5 \cdot 10^{11} - 1 = 2363 + 168\ 406\ 871?$

List of large primes already obtained.

	<i>page</i>		<i>page</i>
11 579	104 x	50 111	134 x
14 143	111 x	53 617	135 x
13 001	98 x	57 143	37 x
15 601	127 x	59 999	86 x
16 091	122 x	67 619	136 x
16 111	60 x	71 999	77 x
16 087	69 x	92 857	47 x
17 027	71 x	93 001	49 x
(set) 18 797	38 x	77 647	58 x
19 403	99 x	96 001	79 x
19 697	47 x	98 999	111 x
19 801	112 x	11 807	156 x
21 001	117 x	17 431	157 x
22 787	123 x	103 333	102 x
22 807	99 x	106 087	106
24 001	33 x	79 999	31 x
32 069	49 x	108 421	109
26 801	119 x	109 001	88 x
32 999	110 x	132 001	58 x
35 999	43 x	132 857	50
37 619	30 x	137 143	80
41 579	29 x	182 353	102
49 999	57 x	150 001	75

Figure 7: Primes greater than 10000 whose logarithms have been obtained.

Primes

11.

207	1741	3.24079	87711	17331	20298	37226	908
209	1747	3.24229	29049	82930	93972	20830	1321
209	1753	3.24378	19160	93794	93236	96628	514
211	1759	3.24526	58394	57461	26128	36925	9391
211	1777	3.24968	74278	05301	52549	15522	0351
211	1783	3.25115	13431	75354	60160	05806	6141
212	1787	3.25212	45525	05644	23677	80598	0671
213	1789	3.25261	03405	67372	99898	10518	1201
213	1801	3.25551	37128	19533	32604	76017	3211
214	1811	3.25791	84503	14058	40769	02819	0701
214	1823	3.26078	66686	54976	30145	67580	8471
214	1831	3.26268	83443	01696	47100	45123	45241
215	1847	3.26646	68954	40241	40759	55077	8391
215	1861	3.26974	63731	30767	01147	33228	2101
216	1867	3.27114	43179	49078	30619	33694	8181
216	1871	3.27207	37875	00009	91904	14158	7291
217	1873	3.27253	77773	75237	37081	44920	2071
217	1877	3.27346	42726	21346	31540	52529	1301
217	1879	3.27392	67801	00525	60943	58407	4831
218	1889	3.27623	19579	21833	58520	21940	1931
219	1901	3.27898	21168	65443	13828	93557	0511
219	1907	3.28035	06930	46005	62303	05577	7921
220	1913	3.28171	49700	27295	85695	97785	4751
220	1931	3.28578	22737	79394	70906	68877	2101
221	1933	3.28623	18540	28553	01132	85510	2631
221	1949	3.28981	18391	17621	43519	19958	0371
222	1951	3.29025	72693	94518	06938	15965	5861

Figure 8: The primes from 1741 to 1951 and their logarithms.

3 Volume 2 (K2)

This volume spans from page 241 to 536. It contains the computations of the logarithms of all the primes between 2000 and 10000 not computed in volume 1.

For example, page K2/242 (figure 9) shows a computation of $\log 2011$ and two computations of $\log 2017$. For the first computation of $\log 2017$, Sang considers $n = 1\,340\,000\,000$ and writes $\frac{n+1}{9 \cdot 97 \cdot 761} = 2017$.

Sang gives a reference to page 189, which contains the decomposition for $n = 670\,000\,000$ which could be reused here.

Then, Sang computes the development of $\log\left(\frac{n+1}{n}\right) = \log\left(1 + \frac{1}{n}\right)$:

$$\begin{aligned} \frac{1}{n} \cdot M &= .00000\,00003\,24100\,35962\,92924\,087 \\ \frac{1}{2n^2} \cdot M &= .00000\,00000\,00000\,00012\,09329\,700 \\ \frac{1}{3n^3} \cdot M &= .00000\,00000\,00000\,00000\,00000\,001 \end{aligned}$$

all values being rounded to the 28th decimal place. Incidentally, this shows just how important it is for n to be as large as possible.

Adding the value of $\log n$, which is obtained from that of $\log 67$ known since page 19, Sang obtains

$$\log(n+1) = 9.12710\,47986\,88907\,98887\,12299\,627$$

for which he does not write the characteristic 9. Sang's value is correctly rounded to the 28th decimal place.

Subtracting the logarithms of 873 (9×97) and 761, Sang obtains

$$\log 2017 = 3.30470\,58982\,12765\,43612\,80880\,089$$

which is off by one unit of the 28th place.

Another computation is then performed using $n = 71\,900\,000$ and considering $\log(n-1)$, from which Sang derives

$$\log 2017 = 3.30470\,58982\,12765\,43612\,80880\,091$$

and Sang then averages both values, obtaining the value

$$\log 2017 = 3.30470\,58982\,12765\,43612\,80880\,090$$

which is correctly rounded to the 28th place.

Construction. 242.

+1	.00000	00045	86002	97680	30816	014
-2				2421	33208	912
+3						1704
+	.00000	00045	86002	95258	97607	954
<i>n</i>	.97634	99790	03273	41875	01137	758
<i>n</i> +1	.97634	99835	89276	37133	98745	772
33.1427	.67293	79129	92534	43106	42861	898
2011	.30341	20705	96741	94027	55884	666
<i>Let n = 1340 000 000, (n+1) ÷ 9.97.761 = 2017 (see p. 189)</i>						
+1	.00000	00003	24100	35962	92924	087
-2				12	09329	700
+3						1
+	.00000	00003	24100	35950	83594	388
<i>n</i>	.12710	47983	64807	62936	28705	239
<i>n</i> +1	.12710	47986	88907	98887	12299	627
823.761	.82239	89004	76142	55274	31419	538
2017	.30470	58982	12765	43612	80880	089
<i>Let n = 71 900 000, (n-1) ÷ 43.829 = 2017</i>						
-1	.00000	00060	40257	05011	47681	175
-2				4200	45691	941
-3						3 895
-	.00000	00060	40257	09211	93377	011
<i>n</i>	.85672	88903	82882	60776	76506	514
<i>n</i> -1	.85672	88843	42625	51564	83129	503
43.829	.55202	29861	29860	07952	02249	412
2017	.30470	58982	12765	43612	80880	092
<i>Let n = 50 600 000, (n+1) ÷ 3.53.157 = 2027</i>						

Figure 9: An excerpt from volume K2, with the computations of log 2011 and log 2017.

4 Volume 3 (K3)

This volume spans from page 537 to 770. It provides other computations of already known logarithms from page 537 to page 637, as volumes 1 and 2 have already given the logarithms of all primes up to 10000. After page 637, there are two indices.

4.1 An example in volume 3

Page K3/580 (figure 10) starts with the end of the computation of $\log 7603$. Then Sang considers $n = 4029 \cdot 10^4$ which he writes 4029(4). We have $4029 \cdot 10^4 = 5309 \cdot 7589$ and Sang refers to page 206 where $\log 1343$ had been used, which is reused here for the computation of $\log 4029 = \log(3 \times 1343)$.

$\log 5309$ had been computed on page 401, and Sang can therefore derive a value for $\log 7589$. In this case,

$$\begin{aligned}\log 7589 &= \log \left(\frac{n+1}{n} \right) + \log n - \log 5309 \\ &= \log \left(1 + \frac{1}{n} \right) + \log 3 + \log 1343 + 4 \times \log 10 - \log 5309 \\ &= (\log 3 + \log 1343 + 4 \times \log 10 - \log 5309) + \frac{1}{n} - \frac{1}{2n^2} + \frac{1}{3n^3} + \dots\end{aligned}$$

yielding the four terms given by Sang. In that case, Sang's final result is off by 4 places, because the value computed for $\frac{1}{2n^2}$ was off by 3 units of the 28th place. The value of $\log 7589$ was probably compared with those obtained on page 479, and Sang concluded that the present value was off by 4 places, which is written in the margin.

Revision.

580.

(2)	-	52 69413	01540	018			
(3)			+1 73051	831			
(4)				-64			
7603		88098	49904	86753	42716	08486	130 +2
4029(4)	+1 =	5309.7589		3.1343	p206		
Sum		88018	45420	47220	81999	23536	173
(1)		+107	79212	75510	67715	972	
(2)				-13377	03245	853	
(3)					+22	135	
7589		88018	45528	26433	44132	88028	427 -4
231(6)	-1 =	43.709.7577		p.308			
Sum		87949	72891	29491	23949	84715	001
(4,3)			-18	80062	69629	12691	622
7577		87949	72872	49428	54320	72023	379 -1
3813(4)	-1 =	5051.7549		3.1271	p337		
Sum		87788	94367	61321	06396	18068	126
(1)		-113	89836	92376	74227	026	
(2)				-14935	53228	923	
(3)					-26	113	
7549		87788	94253	71483	99083	90586	064 -2
452(6)	-1 =	11.5449.7541		2.226	p500		
Sum		87742	89417	49048	24695	00433	714
(1)		-9	60828	49978	59553	709	
(2)				-106	28633	847	
(3)					-16		
7541		87742	89407	88219	74610	12246	142
4125(4)	+1 =	13.421.7537		5.825	p503		
Sum		87719	85047	43438	81575	34391	091
(1)		+105	28351	07644	24685	491	
(2)				-12761	63766	842	
(3)					+20	625	
7537		87719	85152	71789	76457	95330	365

Figure 10: An excerpt of the computations in volume K3.

4.2 The indices to divisors and primes

Volume K3 ends with two indices, one to divisors (pages 638–728), and one to primes (pages 729–770) involved in the various computations of the first three volumes K1, K2 and K3. These indices have not been reconstructed, but my reconstruction of (most of) the computation steps should for the moment suffice to analyze Sang’s construction. *

4.2.1 The index to divisors

This index lists the values of n used in computing logarithms. For instance, page 697 (figure 11) lists the value 3767 and shows that $n = 3767 \cdot 10^6$ was used on page 554. The entry “–” indicates that the decomposition of $n - 1$ was used and is equal to $7 \cdot 7 \cdot 31 \cdot 271 \cdot 9151$. This decomposition was used to compute $\log 9151$.

The value 3785, for instance was used on page 393 in the decomposition $3785 \cdot 10^7 + 1 = 3 \cdot 11 \cdot 37 \cdot 5081 \cdot 6101$, from which $\log 5081$ was obtained. Moreover, $3785 = 5 \cdot 757$. The factor 5081 is underlined because its logarithm is derived and it is not the greatest factor. In general, the decompositions are used to derive the logarithms of the greatest factors.

4.2.2 The index to primes

The index to divisors is followed by an index to primes. For each prime, Sang lists the divisors which have been used to compute it. For instance, on page 761 (figure 12), the prime 7349 was obtained by three different computations, one involving $n = 6211 \cdot 10^6$ (page 461), a second one involving $n = 1138 \cdot 10^6$ (also page 461), and a third one involving $n = 3318 \cdot 10^5$ (page 583). The index to divisors can be used to locate the computations. Most primes have been computed by three independent decompositions, but some, such as 7351, have been computed four times, or rather, have been involved in four independent computations. 7351, for instance, was computed three times using $n = 111 \cdot 10^4$ (page 54), $n = 5594 \cdot 10^7$ (page 260), and $n = 4483 \cdot 10^6$ (page 581), but it was also involved as a divisor $n = 7351 \cdot 10^6$ (page 404) for the computation of $\log 9007$.

Some of the primes have actually only been computed twice, for instance 9007 ($n = 7351 \cdot 10^6$ on page 404, $n = 1656 \cdot 10^6$ on page 556), but this prime also appears in the decompositions of $n = 1967 \cdot 10^7$ (page 405) and $n = 5533 \cdot 10^4$ (page 600). It is possible that the index to primes gives these references, but I have not checked it. *

Index to Divisors.

697.

3767	3767	6	-	7.7.31.271.9151	554
3775	5.5.151	4	-	3.7.241.7459	472
3784	2.2.2.11.43	5	-	3.37.433.7873	575
3785	5.757	7	+	3.11.37.5081.6101	393
3786	2.3.631	5	-	139.277.9833	542
3793	3793	5	+	233.271.6007	426
3803	3803	5	+	3.149.157.5419	610
3805	5.761	4	-	3.13.139.7019	460
		5	-	3.11.1327.8689	562
3812	2.2.953	6	+	3.19.47.251.5669	415
3813	3.31.41	4	-	5051.7549	580
3817	11.347	5	-	3.3.3.2437.5801	605
		7	+	7.577.1373.6883	324
3818	2.23.83	5	-	7.31.389.4523	620
3833	3833	5	+	3.3.7.7.107.8123	493
3835	5.13.59	4	+	5881.6521	593
3836	2.2.7.137	4	+	3.2153.5939	603
		6	-	13.71.439.9467	523
3838	2.19.101	5	+	13.37.131.6091	429
3846	2.3.641	5	+	29.2683.4943	389
3859	17.227	4	+	37.211.4943	615
3861	3.3.3.11.13	6	+	311.2111.5881	384
3865	5.773	7	-	3.13.53.3733.5009	391
3872	2 ⁵ .11.11	7	+	3.223.6661.8689	449
3889	3889	4	+	61.109.5849	604
3894	2.3.11.59	6	+	67.89.113.5779	418
3896	2.2.2.487	6	-	47.73.149.7621	479
3905	5.11.71	5	+	3.3.3.3209.4507	617
3907	3907	6	+	19.59.797.4373	266
3918	2.3.653	6	-	191.2663.7703	476

Figure 11: An excerpt from volume K3 showing the table to divisors.

Index to Primes.

761.

7349	6211	1138	3318			
7351	111	5594	7351	4483		
7369	5989	138	7369			
7393	19	1257	7203			
7411	2888	6647	764			
7417	3677	4267	7417			
7433	6964	5131	2302			
7451	5957	2831	7413			
7457	407	3386	4032			
7459	5632	3775	3684			
7477	4908	2567	7477	4218		
7481	6664	6792	817			
7487	4796	4449	7055			
7489	5741	1748	4987			
7499	75	4265	943			
7507	268	2432	5708			
7517	4703	4246	3271			
7523	1519	6083	6877			
7529	5541	2707	4483	7529		
7537	938	3356	4125			
7541	46	2116	452			
7547	2784	1231	5199			
7549	2755	4903	3813			
7559	7084	475	2809			
7561	31	5512	753			
7573	672	6616	5576	7573		
7577	7346	5267	231			
7583	4783	7583	2332			
7589	4589	7233	4029			
7591	2366	887	6704			

Figure 12: An excerpt from volume K3 showing the table to primes.

5 Timeline

Throughout Sang's volumes, there are several recapitulations on the progress of the computations.

As mentioned earlier, Sang states at the end of the introductory notice in volume K1 that his work was begun in December 1848 and that the logarithms of all the primes up to 2000 were completed at the end of July 1865.

On page 146 of volume K1, after the computation of $\log 1097$, there is also a note dated September 20, 1853: "This completes the revision (to 25 places) of Callet's table to 61 places. Thus far no error has been found. Henceforth each prime must have its logarithm computed twice."

On page 208, there is the date "8 sept. 1854." On page 209, "4 april 1859." On pages 210 and 211, "5 april 1859." On page 212, "6 april 1859." On page 225, "31 July 1865."

In volume K2, Sang has a note dated 26 January 1875 stating that the computations were begun in August 1865 and completed in September 1874.

On page 274 of that volume, there is the date "26 May 1871." And on page 276, "3 June 1871." On page 279, "4 June 1871."

We also know from the specimens Sang published in 1872 [58] that he had by then computed the logarithms of all primes up to 2600, which is here around page 300.

Next on page 326, we find the date "2 April 1874." On page 390, after the computation of $\log 4973$, Sang writes "This completes the prime numbers up to 5000, 8 June 1874." Indeed, the logarithms of the primes 4987, 4993, 4999 had been computed earlier.

On page 425, there is the date "5 July 1874."

This volume ends with the date "21 September 1874." There is also the note "Index 21 October 1874" which may refer to the index in volume K3.

In volume K3, Sang writes that the computations were begun in October 1874 and that this volume was completed on the 9th of January 1875.

On page 586, Sang mentions that on that day there was a transit of Venus (9 December 1874).

On page 636, Sang has the note "This completes three combinations, at the least, for each prime number under ten thousand. 29 December 1874."

And on page 637, the final date is "30 December 1874."

6 The computation order of the primes

All prime numbers up to 10037, as well as a few others greater than 10037, appear in the construction volumes K1, K2 and K3.

If one considers the order of the first appearances of the logarithms of the primes under 10000 in the first two construction volumes (K1 and K2), one obtains the following list of primes:

3, 11, 79, 2, 5, 2399, 7, 37, 13, 19, 401, 2423, 17, 23, 43, 29, 31, 53, 41, 109, 211, 61, 67, 47, 89, 59, 277, 347, 281, 1439, 71, 73, 107, 83, 163, 97, 197, 101, 137, 263, 113, 2633, 7901, 1549, 103, 421, 127, 2963, 863, 239, 241, 233, 2243, 6469, 271, 9091, 4649, 199, 181, 641, 1087, 2999, 3001, 1579, 2521, 491, 3253, 8999, 9001, 139, 269, 631, 7541, 1913, 4889, 311, 461, 547, 131, 229, 823, 811, 149, 8111, 1973, 1423, 887, 883, 2753, 151, 157, 7351, 2293, 293, 499, 167, 4999, 1667, 2381, 173, 179, 853, 3517, 1747, 2207, 191, 1889, 4363, 3089, 6911, 3617, 1453, 797, 647, 193, 1019, 317, 991, 457, 1069, 223, 967, 617, 1381, 4111, 227, 839, 6299, 6301, 251, 9403, 257, 1801, 439, 383, 8867, 283, 2143, 2459, 7109, 307, 313, 379, 809, 1409, 1033, 331, 9601, 5647, 9199, 3067, 467, 337, 1181, 7499, 577, 359, 2027, 419, 349, 857, 353, 2069, 1373, 367, 431, 503, 6037, 373, 3499, 389, 1129, 3889, 2477, 3533, 397, 2267, 2711, 409, 643, 1493, 2647, 4091, 3719, 5689, 1307, 433, 1301, 619, 2549, 1831, 443, 1693, 7561, 3433, 7333, 449, 683, 5641, 1877, 1291, 463, 751, 479, 1823, 487, 5323, 3299, 3301, 541, 9901, 521, 1523, 613, 509, 4637, 2777, 523, 1283, 1193, 7283, 557, 2693, 2099, 563, 1123, 8933, 569, 947, 7507, 1609, 571, 673, 587, 3011, 661, 593, 4241, 829, 601, 599, 821, 607, 2137, 1249, 653, 659, 677, 691, 701, 709, 1021, 719, 727, 733, 739, 743, 3607, 1187, 757, 761, 769, 773, 787, 1753, 9679, 827, 859, 877, 881, 907, 911, 919, 929, 1697, 937, 941, 953, 971, 977, 983, 997, 1009, 1013, 1031, 1039, 1049, 1051, 1061, 1063, 1091, 1093, 1097, 1103, 2309, 1109, 4153, 1117, 2617, 2179, 1151, 1153, 1163, 1171, 8861, 1201, 4273, 1213, 3121, 1217, 1223, 1229, 2741, 1231, 1237, 1259, 1277, 1279, 6311, 1289, 1297, 2089, 1303, 1319, 2591, 1321, 1789, 7307, 1327, 1361, 1367, 9689, 1399, 2383, 1427, 1429, 1433, 1447, 1451, 1459, 1471, 6961, 1993, 1481, 1483, 1487, 1489, 1619, 1499, 1511, 1531, 3947, 1543, 3163, 1553, 2791, 4243, 9871, 5791, 1559, 1567, 1571, 1583, 6343, 6217, 1597, 1601, 1607, 1613, 1621, 1627, 1637, 1657, 1663, 5879, 8609, 1669, 1699, 1777, 1709, 1721, 1723, 1733, 3251, 5749, 7079, 4327, 4957, 1741, 2707, 2287, 5501, 1759, 2237, 1783, 5147,

1787, 1811, 3571, 1847, 5273, 1861, 1867, 5119, 1871, 9883, 1873,
1879, 3389, 1901, 1907, 1931, 1933, 1949, 1951, 1979, 1987, 1997,
1999, 2003, 2011, 2017, 3881, 9319, 2203, 4639, 2957, 3769, 3203,
8447, 2851, 3511, 8389, 3229, 3691, 2797, 2971, 3701, 2749, 2377,
7643, 3793, 2579, 2081, 9619, 8297, 7523, 3907, 9461, 3187, 4357,
4621, 4373, 6263, 7027, 4127, 6967, 3821, 2029, 6659, 2039, 3557,
2053, 2239, 2063, 2083, 3851, 2087, 4177, 2111, 7591, 2113, 2129,
2131, 2141, 4657, 3373, 2153, 5087, 2161, 2503, 2213, 8423, 2221,
2251, 2699, 2269, 2273, 6619, 4703, 3671, 7517, 5279, 2281, 2297,
2729, 4349, 3347, 2311, 2333, 4463, 5657, 6451, 2339, 2341, 2347,
2351, 5039, 2357, 2371, 3491, 2389, 4211, 2393, 9811, 2411, 4547,
2417, 3331, 2437, 4931, 6551, 2441, 2447, 2473, 2833, 2467, 8461,
2531, 4813, 3209, 2539, 9059, 2543, 2551, 2557, 4099, 2593, 7253,
2609, 5743, 2621, 2657, 4679, 2663, 2659, 2803, 2671, 2677, 2683,
2687, 4139, 2689, 2713, 2719, 2731, 6029, 2767, 2789, 9623, 2801,
3019, 8233, 4987, 3583, 4591, 2819, 7127, 9803, 2837, 9293, 2843,
2857, 2861, 2879, 2887, 2897, 5209, 6359, 2903, 2909, 2917, 2927,
8231, 2939, 2953, 2969, 3853, 3023, 3037, 9829, 3041, 4567, 4129,
8191, 3049, 3061, 8783, 3079, 4597, 5417, 3083, 3643, 3109, 8161,
8839, 9857, 4871, 3119, 3137, 3167, 3169, 6883, 3181, 3191, 3217,
5281, 3221, 3257, 7963, 3259, 3271, 6833, 3307, 3911, 3313, 3319,
3343, 3323, 5519, 5197, 3329, 3359, 3361, 9733, 3371, 6173, 4507,
3391, 3407, 8779, 4093, 4271, 3413, 3449, 3457, 3461, 3463, 3467,
3469, 3527, 5059, 3529, 3539, 5939, 3541, 3547, 3559, 3581, 3593,
3613, 3623, 5527, 9221, 3727, 6983, 3631, 4409, 3637, 3659, 4297,
3673, 3677, 3697, 3709, 3733, 3739, 3761, 3767, 5021, 3779, 3797,
5179, 5717, 6869, 3803, 3823, 9157, 3833, 4951, 6229, 3847, 5171,
3863, 3877, 7451, 3917, 3919, 3923, 3929, 6871, 3931, 3943, 3967,
3989, 4001, 4003, 4007, 4013, 6581, 5659, 4019, 4021, 4027, 4049,
6959, 4051, 4057, 4073, 4079, 4133, 4157, 4159, 4721, 6781, 4201,
8677, 4217, 7393, 4219, 4229, 8629, 4231, 9277, 4253, 4259, 7789,
4261, 4283, 9439, 4289, 4337, 4339, 5023, 4391, 4397, 4421, 4423,
4483, 4993, 4441, 4447, 4451, 8219, 4457, 4481, 4493, 4513, 4517,
4519, 5167, 4523, 7949, 4549, 4561, 4583, 8363, 7187, 4603, 7681,
7757, 4643, 4651, 4663, 4673, 4691, 4723, 9941, 4729, 5861, 4733,
8221, 4751, 4759, 4783, 5927, 4787, 4789, 9787, 4793, 4799, 9257,
4801, 4817, 5881, 4831, 8243, 9587, 6247, 4861, 4877, 4903, 4909,
4919, 5399, 6089, 4933, 4937, 4943, 4967, 4969, 4973, 5003, 5009,
5011, 5051, 6337, 5077, 5783, 5477, 6211, 8951, 6101, 5081, 9013,
5099, 5101, 8101, 5107, 7477, 6737, 5113, 5153, 5189, 9551, 5227,
5231, 5233, 5237, 5261, 5297, 5303, 5309, 5333, 5347, 5351, 5381,

5387, 5393, 5407, 5413, 9007, 5419, 5843, 5431, 5437, 9739, 5441,
 7129, 5443, 5449, 5471, 5479, 8167, 5483, 6673, 5503, 5507, 5521,
 5531, 5557, 6689, 8209, 5563, 5569, 5573, 5581, 5591, 5623, 5639,
 5651, 5653, 5669, 5683, 5693, 5701, 5711, 5737, 5741, 5779, 5801,
 6997, 5807, 6703, 5813, 5821, 5827, 5839, 5849, 5851, 9323, 5857,
 5867, 5869, 8887, 5897, 5903, 5923, 5953, 6733, 5981, 5987, 6857,
 6007, 6011, 6043, 6047, 9283, 6053, 6067, 6073, 6079, 6091, 7669,
 6113, 6269, 6121, 6131, 6133, 6143, 6151, 6163, 8467, 6197, 6199,
 6203, 9721, 6221, 6257, 6271, 6277, 6287, 6367, 6317, 6323, 8641,
 6329, 6353, 7537, 6361, 6373, 7219, 6379, 7547, 6389, 6397, 6421,
 6427, 6449, 6473, 6481, 6491, 6521, 6529, 6547, 6553, 6563, 6569,
 6571, 8513, 6577, 6599, 6607, 6637, 6653, 8689, 6661, 6679, 6691,
 6701, 6709, 6719, 6761, 6763, 6779, 6791, 6793, 6803, 7247, 6823,
 8543, 6827, 6829, 6841, 6863, 6899, 6907, 6917, 7877, 6947, 6949,
 6971, 6977, 6991, 7001, 7013, 7019, 7039, 7349, 7043, 7057, 7069,
 7103, 7121, 9649, 7151, 7159, 8761, 7177, 7193, 7207, 7211, 7213,
 7229, 7237, 7243, 7297, 7309, 7321, 9133, 7331, 7369, 7411, 7417,
 7433, 7457, 7459, 7481, 7487, 7489, 7529, 7549, 7559, 7573, 7687,
 7607, 7703, 7759, 7817, 7823, 7873, 7577, 7583, 7589, 7603, 7621,
 7639, 7649, 7673, 7691, 7699, 7717, 7907, 7723, 7727, 7741, 7793,
 7829, 7841, 7753, 7853, 9203, 7867, 7879, 7883, 7919, 7933, 7951,
 7993, 8069, 7927, 7937, 8011, 8053, 8009, 8017, 8039, 8059, 8081,
 8087, 8093, 8179, 8273, 8311, 8329, 8089, 8117, 8123, 8147, 8171,
 8269, 8287, 8291, 8293, 8317, 8353, 8369, 8377, 8419, 8429, 8431,
 8237, 8263, 8387, 8443, 8501, 8521, 9521, 8527, 8537, 8539, 8581,
 8623, 8647, 8699, 8563, 8573, 8597, 8599, 8627, 8663, 8669, 8681,
 8693, 8707, 8807, 8819, 8863, 9067, 9161, 9281, 8821, 8719, 8713,
 8731, 8737, 8741, 8747, 9029, 8753, 8803, 9463, 8831, 8837, 8893,
 8923, 8929, 8941, 8969, 8971, 8963, 8849, 9011, 9041, 9043, 9049,
 9103, 9109, 9127, 9151, 9173, 9181, 9137, 9473, 9187, 9209, 9227,
 9239, 9241, 9337, 9311, 9341, 9343, 9349, 9371, 9377, 9391, 9397,
 9413, 9421, 9431, 9433, 9419, 9437, 9467, 9491, 9479, 9497, 9511,
 9533, 9539, 9547, 9613, 9629, 9631, 9643, 9661, 9677, 9697, 9719,
 9743, 9749, 9767, 9769, 9781, 9791, 9817, 9833, 9839, 9851, 9859,
 9887, 9907, 9949, 9967, 9973, 9931, 9923, 9929

This sequence is represented graphically in figure 13. The abscissa ranges from 1 to 1229, as there are 1229 primes from 2 to 9973. The highlighted value corresponds to the 43rd computed logarithm, which is $\log 7901$. What this figure shows is that the logarithms were mostly computed in quasi-ascending order, with occasional computations of higher values. Sang has tried as much

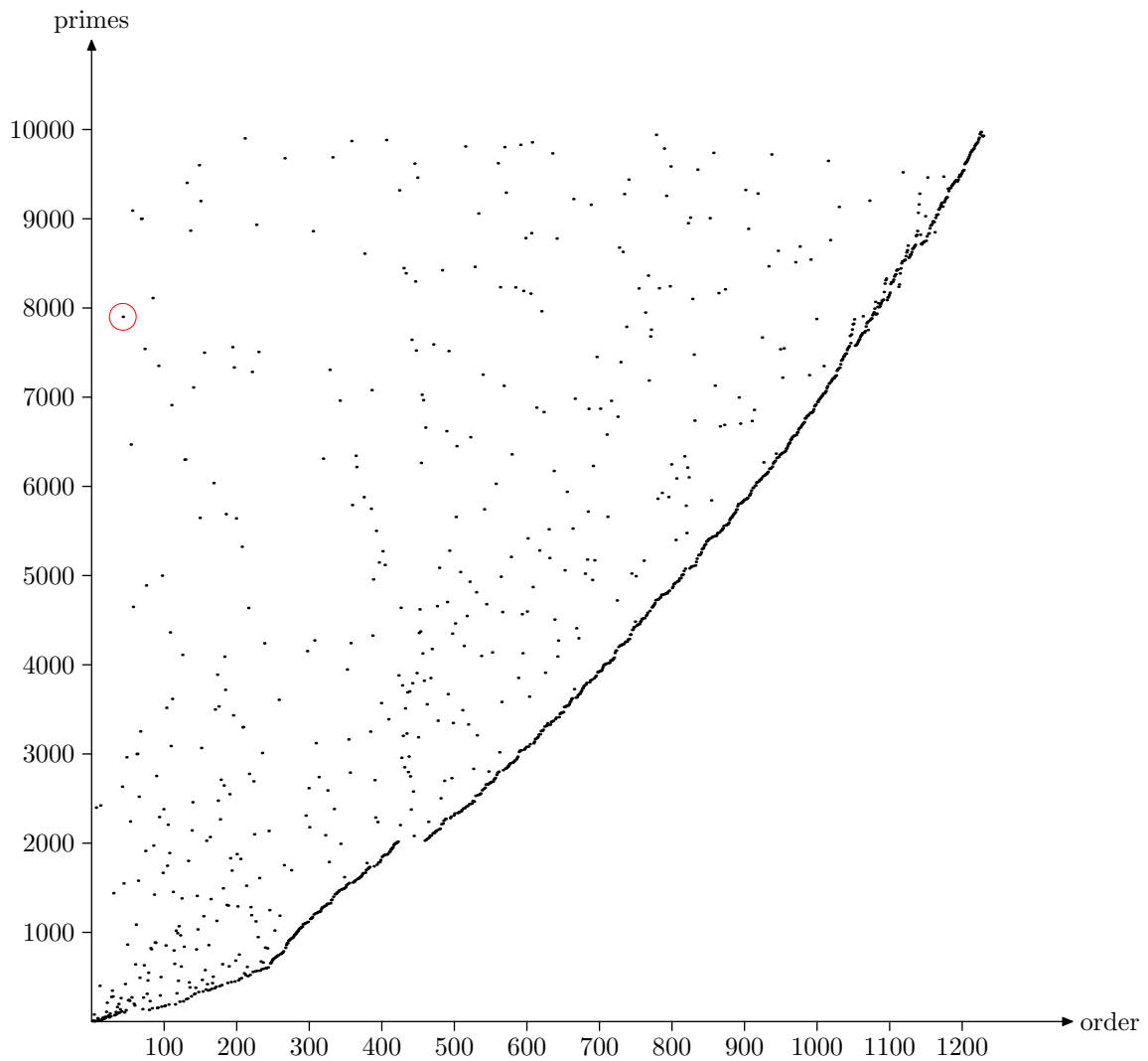


Figure 13: Graphical representation of the first appearance of a prime. The circled point is the prime number 7901, which is the 43rd logarithm of a prime computed. These logarithms were computed between 1848 and 1874.

as possible to avoid gaps. However, we can see a strange gap between the computation of $\log 2017$ (422nd value computed) and $\log 2029$ (459th value computed). Between these two computations, which occurred on pages 242 and 268, Sang computed the logarithms or 36 other primes, all greater than 2017. The first of these primes was 3881. It remains to see why Sang felt the need to introduce this break. It is possible that a number of divisors had been computed separately and were shuffled in at this stage. *

7 The encoding of the computation steps

7.1 Recording the steps

In order to give a good account of Sang's steps for the computation of the logarithms of primes, I have made extensive recordings of the original volumes. For instance, for pages 66 to 73 in volume K1, I took a number of compact notes (figure 14).

66:	<u>1100000</u> , <u>1100001</u> , <u>1029</u> , <u>1069</u> , <u>1099999</u> , <u>2407</u> , <u>457</u> , <u>12900</u>
67:	<u>2900</u> , <u>2901</u> , <u>3</u> , <u>967</u> , <u>2899</u> , <u>13</u> , <u>223</u> , <u>29000</u> , <u>29000</u> , <u>29001</u> , <u>21</u> , <u>1381</u>
68:	<u>28999</u> , <u>47</u> , <u>617</u> , <u>37000</u> , <u>37000</u> , <u>37001</u> , <u>163</u> , <u>227</u> , <u>36999</u> , <u>9</u> , <u>4111</u>
69:	<u>370000</u> , <u>370000</u> , <u>370001</u> , <u>23</u> , <u>16087</u> , <u>369999</u> , <u>9</u> , <u>41111</u> , <u>49</u> , <u>839</u> , <u>163001</u>
70:	<u>63000</u> , <u>6301</u> , <u>6299</u> , <u>63000</u> , <u>63000</u> , <u>63001</u> , <u>251</u>
71:	<u>62999</u> , <u>73</u> , <u>863</u> , <u>630000</u> , <u>630000</u> , <u>630001</u> , <u>67</u> , <u>9403</u> , <u>629999</u> , <u>37</u>
	<u>17027</u> , <u>1800</u>
72:	<u>1800</u> , <u>1801</u> , <u>1799</u> , <u>7</u> , <u>257</u> , <u>18000</u>
73:	<u>18000</u> , <u>18001</u> , <u>47</u> , <u>383</u> , <u>17999</u> , <u>41</u> , <u>439</u> , <u>1800000</u> , <u>1800000</u>
	<u>1800001</u> , <u>203</u> , <u>8867</u> , <u>15000</u>

Figure 14: A first excerpt from my notes for volume K1.

I took in fact a total of 36 pages of handwritten notes and these notes were then standardised in a mere text file. For instance, for page 71 (figure 5), we have the following lines (the text file actually had one value per line, but I give here a compacted version):

71

62999 73 863 D630000 630000 630001 67 9403 629999 37 17027 D1800

This reads as follows: on page 71, the logarithms of 62999, 73, 863, etc., are given. Values starting with “D” correspond to divisors, so that $n = 630000$ and $n = 1800$ are used on that page. In the above excerpt, divisors are underlined by square brackets, whereas newly found logarithms of primes are underlined with straight lines. These steps have been recorded until page 218, when, for lack of time, a less complete procedure was devised. *

After page 218, I have only recorded the divisors and the primes directly derived from them. For instance, for page 334, I only took the following notes (figure 15):

334

1518(5):3413 248(7):3449 2792(5):3449 541(8):3457 2245(6):3457

This means that on page 334 the value $n = 1518 \cdot 10^5$ is considered, and either $n + 1$ or $n - 1$ contains the factor 3413, and similarly for the other cases.

334	151800000 : 3413	2480 (6) : 3449	279200000 : 3449
	54100 (6) : 3457	2245 (6) : 3457	
335	665 (6) : 3461	27200000 : 3461	1431 (9) : 3463
	2682 (6) : 3463	1556 (6) : 3467	149200000 : 3467
336	81600 (6) : 3469	1813 (6) : 3469	32020 (6) : 3527
	277 (6) : 3527	18290 (6) : 5059	

Figure 15: A second excerpt from my notes for volume K1.

Finally, in order to trace the steps of the computation, I have kept track of which logarithms had already been computed, and hence which ones were known and which ones were obtained by a given divisor. However, in a few instances my recording was not sufficient, and I have therefore “forced” some logarithms to be known. For example, my typed recording of the first pages reads:

6
D10
7
11 9 3 81 D80
8
81 79 *2 *5 2400
9
D2400 2401 2399 7

This means that on page 6, $n = 10$ is considered, on page 11 the logarithms of 11, 9, 3 and 81 are given, and then Sang considered $n = 80$. On page 8, Sang gave the logarithms of 81, 80 (which I did not record), 79, 2, 5, and 2400. I have “forced” the logarithms of 2 and 5 to be known, so that the later steps can take them into account. This was encoded by asterisks. This was necessary because the initial step involves using the logarithm of 10, which is not prime. Most likely, $\log 2$ was then computed from $\log 80$ and $\log 10$, and $\log 5$ was computed from $\log 10$ and $\log 2$. Such “tweaking” was used in a few other instances.

This encoding then was used to produce a “readable” version of my notes. For page 8, this readable version reads:

page 8:
 $\log(81)=\log(3^4)$ [$\log(3)$ known]
 $\log(79)=\log(79)$ [$\log(79)$ known]
 $\log(2)$ (assumed to be known now)
 $\log(5)$ (assumed to be known now)
 $\log(2400)=\log(2^5 \times 3 \times 5^2)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]

This means that page 8 gives the logarithm of 81 (computed using the logarithm of 3), the logarithm of 79 (which is computed here and then considered known), the logarithms of 2 and 5 (which are forced to be known), and finally the logarithm of 2400 which is obtained from three other known logarithms. In all these transcriptions, whenever a number appears on the right-hand side of an equation, it is decomposed into its factors. Hence, $\log(79)=\log(79)$ means that 79 is a prime number.

For page 71, the “readable” transcription is:

page 71:

```

log(62999)=log(73 × 863) [log(73) log(863) known]
log(73)=log(73) [log(73) known]
log(863)=log(863) [log(863) known]
decomposition(630000)
  630000-1=37 × 17027
  630000+1=67 × 9403
    → allows the comp. of log(9403)
log(630000)=log(24 × 32 × 54 × 7) [log(2) log(3) log(5) log(7) known]
log(630001)=log(67 × 9403) [log(67) log(9403) known]
log(67)=log(67) [log(67) known]
log(9403)=log(9403) [log(9403) known]
log(629999)=log(37 × 17027) [log(37) known]
log(37)=log(37) [log(37) known]
log(17027)=log(17027)
decomposition(1800)
  1800-1=7 × 257
    → allows the comp. of log(257)
  1800+1=1801
    → allows the comp. of log(1801)

```

Here, the logarithm of 62999 is computed from the logarithm of 73, known since page 23, and the logarithm of 863 also known. These two logarithms are then given, then $n = 630000$ is considered and $n-1$ and $n+1$ are decomposed, which allows for the computation of the logarithms of 17027 and 9403. Only logarithms smaller than 10000 are recorded in my procedure, which explains that I did not highlight the derivation of the logarithm of 17027. This also explains why for instance the logarithm of 629999 is given, but that I only stress that the logarithm of 37 is known.

Although not perfect, I believe that this readable version will make it much easier to go through Sang’s construction.

After page 218, my readable version is simpler, since I only record the divisors and the primes obtained from them, for instance here for page 334 (figure 15):

page 334:

- ⇒ $1518 \times 10^5 + 1 = 79 \times 563 \times 3413$
 —→ This equation enables the computation of $\log(3413)$
- ⇒ $248 \times 10^7 + 1 = 3 \times 17 \times 23 \times 613 \times 3449$
 —→ This equation enables the computation of $\log(3449)$
- ⇒ $2792 \times 10^5 - 1 = 13^2 \times 479 \times 3449$
 —→ This equation enables the computation of $\log(3449)$
- ⇒ $541 \times 10^8 - 1 = 3^2 \times 19 \times 23^2 \times 173 \times 3457$
 —→ This equation enables the computation of $\log(3457)$
- ⇒ $2245 \times 10^6 - 1 = 3 \times 11^2 \times 1789 \times 3457$
 —→ This equation enables the computation of $\log(3457)$

7.2 Special derivations

As alluded above, a number of logarithms have been derived in such a way as to make it difficult to guess how they were derived by merely looking at the notes I took. The problem does not always lie in my incomplete notes, but may be due to Sang not detailing everything. For instance, on page 87 Sang gives $\log 367$ which has been computed using $\log 108999$ and $\log 297$, but he nowhere gives the value of $\log 108999$.

Since the knowledge of the order of the logarithms is important for later guesses, a number of logarithms have been “forced” to be known in my procedure. The corresponding cases up to page 218 are the following, with uncertainties marked:

- page 8: $\log 2$ was probably computed with $\log 2 = (\log 80 - \log 10)/3$, then $\log 5 = 1 - \log 2$; *
- page 13: $\log 17$ was computed from $\log 2499$;
- page 18: $\log 109$ was perhaps obtained from $\log 31501$; *
- page 18: $\log 211$ is probably obtained from $\log 22999$; *
- page 18: $\log 61$ was computed from $\log 2501$;
- page 19: $\log 67$ was computed from $\log 27001$;
- page 48: $\log 229$ was probably obtained from $\log 29999$; *

- page 53: $\log 151$ was obtained from $\log 133333$;
- page 55: $\log 293$ was computed from $\log 46001$;
- page 55: $\log 2293$ was computed from $\log 360001$;
- page 59: $\log 3517$ was computed from $\log 3000001$;
- page 62: $\log 4363$ was computed from $\log 833333$;
- page 62: $\log 3089$ was computed from $\log 589999$;
- page 62: $\log 6911$ was computed from $\log 1320001$;
- page 64: $\log 1019$ was computed from $\log 196667$;
- page 83: $\log 359$ was computed from $\log 207143$, which was itself obtained from $\log 1450001 = \log(7 \times 207143)$ (page 61);
- page 87: $\log 367$ was computed from $\log(109000 - 1) = \log(297 \times 367)$;
- page 93: $\log 2267$ was computed from $\log 899999$;
- page 94: $\log 1493$ was computed from $\log 959999$;
- page 100: $\log 1693$ was computed from $\log 749999$;
- page 103: $\log 683$ was computed from $\log 306667$;
- page 104: $\log 5641$ was computed from $\log(220000 - 1) = \log(39 \times 5641)$;
- page 110: $\log 9901$ was directly computed;
- page 111: $\log 521$ was computed from $\log(9900 - 1) = \log(19 \times 521)$;
- page 116: $\log 2693$ was computed from $\log 1500001$;
- page 126: $\log 599$ was computed from $\log 359999$;
- page 134: $\log 3607$ was computed from $\log 2680001$;
- page 138: $\log 877$ was computed from $\log(59800000 - 1) = \log(21 \times 877 \times 3247)$ (did I forget to record 59800000?); *
- page 140: $\log 941$ was computed from $\log(269000000 + 1)$;
- page 143: $\log 1009$ was computed from $\log 3736327$, which was computed from $\log(6490000000 - 1) = \log(1737 \times 3736327)$;

- page 145: $\log 1063$ was computed from $\log(2280000000 - 1)$;
- page 145: $\log 1091$ was computed from $\log(4220000000 + 1)$;
- page 148: $\log 1117$ was computed from $\log(237 \cdot 10^8 - 1)$;
- page 151: $\log 1153$ was computed from $\log(186 \cdot 10^7 - 1)$;
- page 161: $\log 1277$ was computed from $\log(82 \cdot 10^6 + 1)$;
- page 162: $\log 1289$ was probably computed from $\log(7230000 + 1)$; *
- page 166: $\log 1327$ was computed from $\log(382 \cdot 10^8 - 1)$;
- page 177: $\log 1487$ was computed from $\log(343 \cdot 10^8 - 1)$;
- page 180: $\log 1499$ was computed from $\log(1087 \cdot 10^7 - 1)$;
- page 184: $\log 2791$ was computed from $\log(2645 \cdot 10^6 - 1)$;
- page 188: $\log 1571$ was probably computed from $\log(309 \cdot 10^5 - 1)$; *
- page 194: $\log 1627$ was computed from $\log(373 \cdot 10^7 + 1)$;
- page 201: $\log 1777$ was computed from $\log(1132 \cdot 10^7 - 1)$;
- page 206: $\log 4327$ was computed from $\log(3056 \cdot 10^6 + 1)$;
- page 211: $\log 1783$ was computed from $\log(1202 \cdot 10^7 + 1)$;
- page 213: $\log 1811$ was computed from $\log(789 \cdot 10^7 - 1)$;
- page 216: $\log 1871$ was computed from $\log(412 \cdot 10^7 + 1)$.

Further uncertainties have not been recorded but should be recorded in the future. *

8 What remains to be done

1. As mentioned above, I have not made a detailed record of all the steps from pages 219 to 637 (volumes K2 and K3), but I only wrote down the divisors considered by Sang and the primes he derived from them. Sang may have given the logarithms of other numbers in the course of these derivations, and these values should be recorded. This should now be very easy, as one merely has to take my reconstruction and add the missing informations at the corresponding places. In the future, a more accurate reconstruction can then be provided.

2. Other than that, a few derivations should again be examined carefully (see the * marks for pages 8, 18, 48, 138, 162 and 188).
3. Page ranges should also be checked for each volume.
4. During the analysis of the notes I took of Acc 10780/16, 17 and 18, I also found some typos, and I have recorded some of those concerning Acc 10780/17 (K2) and 18 (K3). Some of these typos are probably typos in the original volumes, and this should be checked. For each of these typos, I have copied a large number n and a prime p , the logarithm of the prime being obtained either from that of $n - 1$ or $n + 1$ and from other logarithms. The table below gives the correct values of n and the primes p , with possible uncertainties underlined. For instance, $\underline{735}(7)$ represents $735 \cdot 10^7$, but Sang's manuscript may have another digit instead of 3. There may also be typos in the number of zeros, that is, in the power of 10. When nothing is underlined, both values should be checked.

Page	n	p	Page	n	p
256	2516(8)	9199	416	<u>294</u> (7)	5701
318	82(8)	3083	467	5155(<u>4</u>)	7229
358	2683(7)	6959	510	<u>4872</u> (7)	8831
365	<u>3033</u> (6)	4259	520	2003(<u>9</u>)	9371
375	<u>735</u> (7)	4583	569	3976(<u>4</u>)	8237
381	3311(5)	5927	577	<u>1252</u> (6)	7793
397	<u>4883</u> (7)	5189	596	<u>7555</u> (4)	6577
413	495(<u>7</u>)	5623	603	<u>3836</u> (4)	5939
414	5293(6)	<u>5653</u>	604	2463(5)	<u>5897</u>
415	4071(6)	<u>5683</u>	629	9855(<u>6</u>)	3331

5. The indices of divisors and primes should also be reconstructed, although they are not indispensable with the search tools of the digital reconstruction.

9 References

The following list covers the most important references¹⁵ related to Sang's table. Not all items of this list are mentioned in the text, and the sources which have not been seen are marked so. I have added notes about the contents of the articles in certain cases.

- [1] Anonymous. Note about Edward Sang's project of computing a nine-figure table of logarithms. *Nature*, 10:471, 1874. [Issue of 8 October 1874. This note was reproduced in [60].]
- [2] Anonymous. Correspondance. *Comptes rendus hebdomadaires des séances de l'Académie des sciences*, 80(22):1392–1393, janvier-juin 1875. [Minutes of the meeting of the 7 June 1875.]
- [3] Anonymous. Dr Edward Sang's logarithmic, trigonometrical, and astronomical tables. *Proceedings of the Royal Society of Edinburgh*, 28:183–196, 1908. [Possibly by Cargill Gilston Knott, reprinted in [19]. Reprints [68].]
- [4] Raymond Clare Archibald. Tables of trigonometric functions in non-sexagesimal arguments. *Mathematical Tables and other Aids to Computation*, 1(2):33–44, April 1943.
- [5] Raymond Clare Archibald. Arithmetic, logarithmic, trigonometric, and astronomical tables, computed, 1848, 1869–89, by Edward Sang, and his daughters Jane Nicol Sang, Flora Chalmers Sang, and presented in 1907 to the Royal Society of Edinburgh, in custody for the British Nation. *Mathematical Tables and other Aids to Computation*, 1(9):368–370, 1945.
- [6] Johann Karl Burckhardt. *Table des diviseurs pour tous les nombres du deuxième million, ou plus exactement, depuis 1020000 à 2028000, avec*

¹⁵**Note on the titles of the works:** Original titles come with many idiosyncrasies and features (line splitting, size, fonts, etc.) which can often not be reproduced in a list of references. It has therefore seemed pointless to capitalize works according to conventions which not only have no relation with the original work, but also do not restore the title entirely. In the following list of references, most title words (except in German) will therefore be left uncapitalized. The names of the authors have also been homogenized and initials expanded, as much as possible.

The reader should keep in mind that this list is not meant as a facsimile of the original works. The original style information could no doubt have been added as a note, but I have not done it here.

- les nombres premiers qui s’y trouvent*. Paris: Veuve Courcier, 1814.
[also published in [8] together with [9] and [7]; reconstructed in [32]]
- [7] Johann Karl Burckhardt. *Table des diviseurs pour tous les nombres du troisième million, ou plus exactement, depuis 2028000 à 3036000, avec les nombres premiers qui s’y trouvent*. Paris: Veuve Courcier, 1816.
[also published in [8] together with [9] and [6]; reconstructed in [33]]
- [8] Johann Karl Burckhardt. *Table des diviseurs pour tous les nombres des 1^{er}, 2^e et 3^e million, ou plus exactement, depuis 1 à 3036000, avec les nombres premiers qui s’y trouvent*. Paris: Veuve Courcier, 1817. [each part was also published separately as [9], [6], and [7]]
- [9] Johann Karl Burckhardt. *Table des diviseurs pour tous les nombres du premier million, ou plus exactement, depuis 1 à 1020000, avec les nombres premiers qui s’y trouvent*. Paris: Veuve Courcier, 1817. [also published in [8] together with [6] and [7]; reconstructed in [31]]
- [10] Jean-François Callet. *Tables portatives de logarithmes, etc.* Paris: Firmin Didot, 1795. [There have been numerous later printings of these tables.]
- [11] Alexander Duncan Davidson Craik. Edward Sang (1805–1890): calculator extraordinary. *Newsletter of the British Society for the History of Mathematics*, 45:32–43, Spring 2002.
- [12] Alexander Duncan Davidson Craik. The logarithmic tables of Edward Sang and his daughters. *Historia Mathematica*, 30(1):47–84, February 2003.
- [13] Alexander Duncan Davidson Craik. Sang, Knott and Spence on logarithmic and other tables, 2016. [article written for a joint meeting of the James Clerk Maxwell Society and the British Society for the History of Mathematics in celebration of the 400th anniversary of the publication of John Napier’s *Mirifici Logarithmorum Canonis Descriptio*, 4th April 2014, Clerk Maxwell House, Edinburgh, <https://www.collectanea.eu/napier400memorial>]
- [14] Laurent Fousse, Guillaume Hanrot, Vincent Lefèvre, Patrick Pélissier, and Paul Zimmermann. MPFR: A multiple-precision binary floating-point library with correct rounding. *ACM Transactions on Mathematical Software*, 33(2), 2007.
- [15] James Whitbread Lee Glaisher. Review of Edward Sang’s new table of seven-place logarithms. *The Messenger of Mathematics*, 1:77–80, 1872.

- [16] James Whitbread Lee Glaisher. On the progress to accuracy of logarithmic tables. *Monthly Notices of the Royal Astronomical Society*, 33:330–345, 1873.
- [17] James Whitbread Lee Glaisher. *Report of the committee on mathematical tables*. London: Taylor and Francis, 1873. [Also published as part of the “Report of the forty-third meeting of the British Association for the advancement of science,” London: John Murray, 1874. A review by R. Radau was published in the *Bulletin des sciences mathématiques et astronomiques*, volume 11, 1876, pp. 7–27]
- [18] G. Govi. Rapport sur l’utilité des tables de logarithmes à plus de sept décimales ; à propos d’un projet publié par M. Sang. *Atti della Reale Accademia di Scienze di Torino*, 8:157–170, 1873. [Reprinted in [58].]
- [19] Ellice Martin Horsburgh, editor. *Modern instruments and methods of calculation: a handbook of the Napier tercentenary exhibition*. London: G. Bell and sons, 1914.
- [20] Charles Hutton. *Mathematical tables: containing common, hyperbolic, and logistic logarithms, also sines, tangents, secants, and versed-sines, etc.* London: G. G. J., J. Robinson, and R. Baldwin, 1785.
- [21] Cargill Gilston Knott. Edward Sang and his logarithmic calculations. [22], pages 261–268.
- [22] Cargill Gilston Knott, editor. *Napier Tercentenary Memorial Volume*. London: Longmans, Green and company, 1915.
- [23] Pierre Alexandre Francisque Lefort. Description des grandes tables logarithmiques et trigonométriques, calculées au bureau du cadastre, sous la direction de Prony, et exposition des méthodes et procédés mis en usage pour leur construction. *Annales de l’Observatoire impérial de Paris*, 4 (supplément):123–150, 1858.
- [24] Pierre Alexandre Francisque Lefort. Observations on Mr Sang’s remarks relative to the great logarithmic table compiled at the Bureau du Cadastre under the direction of M. Prony. *Proceedings of the Royal Society of Edinburgh, Session 1874–1875*, 8:563–581, 1875. [See [61] for Sang’s answer.]
- [25] Percy Alexander MacMahon. Sang’s seven-place logarithms. *Nature*, 97(2442):499, 1916. [Review of the 1915 reprint of Sang’s tables.]

- [26] National Library of Scotland. Inventory Acc.10780: Papers and manuscripts of Edward Sang, 2003. [6 pages, <http://www.nls.uk/catalogues/online/cnmi/inventories/acc10780.pdf>]
- [27] David Bruce Peebles. Edward Sang. *Proceedings of the Royal Society of Edinburgh*, 21:xvii–xxxii, 1897.
- [28] Denis Roegel. A construction of Edward Sang’s projected table of nine-place logarithms to one million (1872). Technical report, LORIA, Nancy, 2010. [This construction is based on the specimen pages [58].]
- [29] Denis Roegel. A reconstruction of Edward Sang’s table of logarithms (1871). Technical report, LORIA, Nancy, 2010. [This is a reconstruction of [55].]
- [30] Denis Roegel. The great logarithmic and trigonometric tables of the French Cadastre: a preliminary investigation. Technical report, LORIA, Nancy, 2010.
- [31] Denis Roegel. A reconstruction of Burckhardt’s table of factors (first million, 1817). Technical report, LORIA, Nancy, 2011. [This is a reconstruction of the table in [9].]
- [32] Denis Roegel. A reconstruction of Burckhardt’s table of factors (second million, 1814). Technical report, LORIA, Nancy, 2011. [This is a reconstruction of the table in [6].]
- [33] Denis Roegel. A reconstruction of Burckhardt’s table of factors (third million, 1816). Technical report, LORIA, Nancy, 2011. [This is a reconstruction of the table in [7].]
- [34] Denis Roegel. A guide to Edward Sang’s tables and to their reconstructions. Technical report, LORIA, Nancy, 2020.
- [35] Denis Roegel. Edward Sang’s computation of sines. Technical report, LORIA, Nancy, 2020.
- [36] Denis Roegel. Edward Sang’s computation of the logarithms of integers. Technical report, LORIA, Nancy, 2020.
- [37] Denis Roegel. A reconstruction of Edward Sang’s table of logarithms of the first 10000 primes (K4). Technical report, LORIA, Nancy, 2020.

- [38] Denis Roegel. A reconstruction of Edward Sang's table of logarithms of the first myriad of integers (K5). Technical report, LORIA, Nancy, 2020.
- [39] Denis Roegel. A reconstruction of Edward Sang's table of logarithms of the second myriad of integers (K6). Technical report, LORIA, Nancy, 2020.
- [40] Denis Roegel. Introduction to Edward Sang's table of logarithms to 15 places. Technical report, LORIA, Nancy, 2020. [This document is supplemented by 90 volumes of tables, as well as a volume gathering the entire table.]
- [41] Denis Roegel. A reconstruction of Edward Sang's auxiliary table for logarithms of almost unitary values (K39,1884). Technical report, LORIA, Nancy, 2020.
- [42] Denis Roegel. A reconstruction of Edward Sang's canon of sines (K40/1,1876). Technical report, LORIA, Nancy, 2020.
- [43] Denis Roegel. A reconstruction of Edward Sang's canon of sines (K40/2,1877). Technical report, LORIA, Nancy, 2020.
- [44] Denis Roegel. A reconstruction of Edward Sang's canon of sines (K41-K42,1881). Technical report, LORIA, Nancy, 2020.
- [45] Denis Roegel. A reconstruction of Edward Sang's table of logarithmic sines and tangents (K43,1888). Technical report, LORIA, Nancy, 2020.
- [46] Denis Roegel. A reconstruction of Edward Sang's table of sines in degrees (K44,1879). Technical report, LORIA, Nancy, 2020.
- [47] Denis Roegel. A reconstruction of Edward Sang's table of circular segments (K45,1879). Technical report, LORIA, Nancy, 2020.
- [48] Denis Roegel. A reconstruction of Edward Sang's table of mean anomalies: volume A (K46,1880). Technical report, LORIA, Nancy, 2020.
- [49] Denis Roegel. A reconstruction of Edward Sang's table of mean anomalies: volume B (K47,1880). Technical report, LORIA, Nancy, 2020.

- [50] Ralph Allen Sampson. Logarithmic, trigonometrical, and astronomical tables: forty-seven quarto volumes in manuscript (1848 to 1890). By Edward Sang, LL.D. In Knott [22], pages 236–237.
- [51] Edward Sang. *Solution of algebraic equations of all orders, whether involving one or more unknown quantities*. Edinburgh: William Tait, 1829.
- [52] Edward Sang. *A new general theory of the teeth of wheels*. Edinburgh: Adam and Charles Black, 1852.
- [53] Edward Sang. Short verbal notice of a simple and direct method of computing the logarithm of a number. *Proceedings of the Royal Society of Edinburgh*, 2:451, 1857. [This is a brief account (four lines) of a method using continued fractions to solve the exponential equation.]
- [54] Edward Sang. *Five place logarithms*. Edinburgh, 1859. [not seen]
- [55] Edward Sang. *A new table of seven-place logarithms of all numbers from 20 000 to 200 000*. London: Charles and Edwin Layton, 1871. [Reconstruction by D. Roegel, 2010 [29].]
- [56] Edward Sang. Account of the new table of logarithms to 200000. *Transactions of the Royal Society of Edinburgh*, 26:521–528, 1872.
- [57] Edward Sang. On mechanical aids to calculation. *Journal of the Institute of Actuaries and Assurance Magazine*, 16:253–265, 1872. [The article was published in the July 1871 issue, but the volume is dated 1872.]
- [58] Edward Sang. Specimen pages of a table of the logarithms of all numbers up to one million...: shortened to nine figures from original calculations to fifteen places of decimals, 1872. [These specimen pages were reprinted in 1874 in a booklet which contained also a reprint of Govi’s report [18], a reprint of Sang’s article on Vlacq’s errors [59], and several other letters by eminent scientists supporting the publication of Sang’s table. The specimen pages were used to construct [28].]
- [59] Edward Sang. On last-place errors in Vlacq’s table of logarithms. *Proceedings of the Royal Society of Edinburgh*, 8:371–376, 1875. [First printed in the 1874 edition of [58].]
- [60] Edward Sang. Remarks on the great logarithmic and trigonometrical tables computed by the Bureau du Cadastre under the direction of M. Prony. *Proceedings of the Royal Society of Edinburgh, Session 1874–1875*, 8:421–436, 1875. [This article reproduces [1].]

- [61] Edward Sang. Reply to M. Lefort's Observations (with a Postscript by M. Lefort). *Proceedings of the Royal Society of Edinburgh, Session 1874–1875*, 8:581–587, 1875. [This is a reply to [24].]
- [62] Edward Sang. On the construction of the canon of sines, for the decimal division of the quadrant. *Proceedings of the Royal Society of Edinburgh*, 9:343–349, 1878.
- [63] Edward Sang. On the precautions to be taken in recording and using the records of original computations. *Proceedings of the Royal Society of Edinburgh*, 9:349–352, 1878.
- [64] Edward Sang. Description of new astronomical tables for the computation of anomalies. *Proceedings of the Royal Society of Edinburgh*, 10(107):726–727, 1880.
- [65] Edward Sang. On the construction of the canon of logarithmic sines. *Proceedings of the Royal Society of Edinburgh*, 12:601–619, 1884.
- [66] Edward Sang. On the need for decimal subdivisions in astronomy and navigation, and on tables requisite therefor. *Proceedings of the Royal Society of Edinburgh*, 12:533–544, 1884.
- [67] Edward Sang. Notice of fundamental tables in trigonometry and astronomy, arranged according to the decimal division of the quadrant. *Proceedings of the Royal Society of Edinburgh*, 16:249–256, 1889.
- [68] Edward Sang. List of trigonometrical and astronomical calculations, in manuscript, 1890. [Dated July 1890. National Library of Scotland: Acc10780/10. Reprinted in [3].]
- [69] Edward Sang. On last-place errors in Vlacq. *Nature*, 42(1094):593, 1890.
- [70] Henry Sherwin. *Mathematical tables*. London: Richard Mount and Thomas Page, 1706. [contains a table of logarithms by Abraham Sharp]
- [71] Shane F. Whelan. Edward Sang: actuary of the Millennium. *Newsletter of the Society of Actuaries in Ireland*, November 1999. [A slightly edited version was published in *The Actuary*, April 2000, page 27.]

10 Record of the construction steps

The construction steps have been recorded in great detail from page 6 to page 218 (almost all of volume K1) and only partially until page 637.

page 6:

```
decomposition(10)
  10-1=32
    → allows the comp. of log(3)
  10+1=11
    → allows the comp. of log(11)
```

page 7:

```
log(11)=log(11) [log(11) known]
log(9)=log(32) [log(3) known]
log(3)=log(3) [log(3) known]
log(81)=log(34) [log(3) known]
decomposition(80)
  80-1=79
    → allows the comp. of log(79)
  80+1=34
```

page 8:

```
log(81)=log(34) [log(3) known]
log(79)=log(79) [log(79) known]
log(2) (assumed to be known now)
log(5) (assumed to be known now)
log(2400)=log(25 × 3 × 52) [log(2) log(3) log(5) known]
```

page 9:

```
decomposition(2400)
  2400-1=2399
    → allows the comp. of log(2399)
  2400+1=74
    → allows the comp. of log(7)
log(2401)=log(74) [log(7) known]
log(2399)=log(2399) [log(2399) known]
log(7)=log(7) [log(7) known]
```

page 10:

```
decomposition(1000)
  1000-1=33 × 37
    → allows the comp. of log(37)
  1000+1=7 × 11 × 13
    → allows the comp. of log(13)
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\log(1001)=\log(7 \times 11 \times 13) \text{ [log(7) log(11) log(13) known]}$$

$$\log(13)=\log(13) \text{ [log(13) known]}$$

$$\log(999)=\log(3^3 \times 37) \text{ [log(3) log(37) known]}$$

$$\log(27)=\log(3^3) \text{ [log(3) known]}$$

$$\log(37)=\log(37) \text{ [log(37) known]}$$

page 11:

decomposition(400)

$$400-1=3 \times 7 \times 19$$

→ allows the comp. of log(19)

$$400+1=401$$

→ allows the comp. of log(401)

$$\log(400)=\log(2^4 \times 5^2) \text{ [log(2) log(5) known]}$$

page 12:

$$\log(401)=\log(401) \text{ [log(401) known]}$$

$$\log(399)=\log(3 \times 7 \times 19) \text{ [log(3) log(7) log(19) known]}$$

$$\log(133)=\log(7 \times 19) \text{ [log(7) log(19) known]}$$

$$\log(19)=\log(19) \text{ [log(19) known]}$$

decomposition(31500)

$$31500-1=13 \times 2423$$

→ allows the comp. of log(2423)

$$31500+1=17^2 \times 109$$

$$\log(31500)=\log(2^2 \times 3^2 \times 5^3 \times 7) \text{ [log(2) log(3) log(5) log(7) known]}$$

page 13:

decomposition(2500)

$$2500-1=3 \times 7^2 \times 17$$

→ allows the comp. of log(17)

$$2500+1=41 \times 61$$

$$\log(2500)=\log(2^2 \times 5^4) \text{ [log(2) log(5) known]}$$

$$\log(2499)=\log(3 \times 7^2 \times 17) \text{ [log(3) log(7) log(17) known]}$$

$$\log(17)=\log(17) \text{ [log(17) known]}$$

page 14:

decomposition(300)

$$300-1=13 \times 23$$

→ allows the comp. of log(23)

$$300+1=7 \times 43$$

→ allows the comp. of log(43)

$$\log(300)=\log(2^2 \times 3 \times 5^2) \text{ [log(2) log(3) log(5) known]}$$

page 15:

$$\log(301)=\log(7 \times 43) \text{ [log(7) log(43) known]}$$

$$\log(7)=\log(7) \text{ [log(7) known]}$$

$$\log(43)=\log(43) \text{ [log(43) known]}$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\log(299)=\log(13 \times 23) \text{ [log(13) log(23) known]}$$

$$\log(13)=\log(13) \text{ [log(13) known]}$$

$$\log(23)=\log(23) \text{ [log(23) known]}$$

decomposition(27000)

$$27000-1=7^2 \times 19 \times 29$$

→ allows the comp. of log(29)

$$27000+1=13 \times 31 \times 67$$

$$\log(27000)=\log(2^3 \times 3^3 \times 5^3) \text{ [log(2) log(3) log(5) known]}$$

page 16:

$$\log(26999)=\log(7^2 \times 19 \times 29) \text{ [log(7) log(19) log(29) known]}$$

$$\log(931)=\log(7^2 \times 19) \text{ [log(7) log(19) known]}$$

$$\log(29)=\log(29) \text{ [log(29) known]}$$

decomposition(900)

$$900-1=29 \times 31$$

→ allows the comp. of log(31)

$$900+1=17 \times 53$$

→ allows the comp. of log(53)

page 17:

$$\log(900)=\log(2^2 \times 3^2 \times 5^2) \text{ [log(2) log(3) log(5) known]}$$

$$\log(901)=\log(17 \times 53) \text{ [log(17) log(53) known]}$$

$$\log(17)=\log(17) \text{ [log(17) known]}$$

$$\log(53)=\log(53) \text{ [log(53) known]}$$

$$\log(899)=\log(29 \times 31) \text{ [log(29) log(31) known]}$$

$$\log(29)=\log(29) \text{ [log(29) known]}$$

$$\log(31)=\log(31) \text{ [log(31) known]}$$

decomposition(23000)

$$23000-1=109 \times 211$$

$$23000+1=3 \times 11 \times 17 \times 41$$

→ allows the comp. of log(41)

page 18:

$$\log(23000)=\log(2^3 \times 5^3 \times 23) \text{ [log(2) log(5) log(23) known]}$$

$$\log(23001)=\log(3 \times 11 \times 17 \times 41) \text{ [log(3) log(11) log(17) log(41) known]}$$

$$\log(561)=\log(3 \times 11 \times 17) \text{ [log(3) log(11) log(17) known]}$$

$$\log(41)=\log(41) \text{ [log(41) known]}$$

$$\log(22999)=\log(109 \times 211)$$

$$\log(31501)=\log(17^2 \times 109) \text{ [log(17) known]}$$

$$\log(289)=\log(17^2) \text{ [log(17) known]}$$

$$\log(109) \text{ (assumed to be known now)}$$

$$\log(22999)=\log(109 \times 211) \text{ [log(109) known]}$$

$$\log(211) \text{ (assumed to be known now)}$$

$$\log(31499)=\log(13 \times 2423) \text{ [log(13) log(2423) known]}$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(13)=\log(13)$ [$\log(13)$ known]
 $\log(2501)=\log(41 \times 61)$ [$\log(41)$ known]
 $\log(41)=\log(41)$ [$\log(41)$ known]
 $\log(61)$ (assumed to be known now)
 $\log(27001)=\log(13 \times 31 \times 67)$ [$\log(13)$ $\log(31)$ known]
 $\log(403)=\log(13 \times 31)$ [$\log(13)$ $\log(31)$ known]

page 19:

$\log(67)$ (assumed to be known now)
decomposition(800)
 $800-1=17 \times 47$
→ allows the comp. of $\log(47)$
 $800+1=3^2 \times 89$
→ allows the comp. of $\log(89)$
 $\log(800)=\log(2^5 \times 5^2)$ [$\log(2)$ $\log(5)$ known]
 $\log(801)=\log(3^2 \times 89)$ [$\log(3)$ $\log(89)$ known]

page 20:

$\log(89)=\log(89)$ [$\log(89)$ known]
 $\log(799)=\log(17 \times 47)$ [$\log(17)$ $\log(47)$ known]
 $\log(17)=\log(17)$ [$\log(17)$ known]
 $\log(47)=\log(47)$ [$\log(47)$ known]
decomposition(3600)
 $3600-1=59 \times 61$
→ allows the comp. of $\log(59)$
 $3600+1=13 \times 277$
→ allows the comp. of $\log(277)$
 $\log(3600)=\log(2^4 \times 3^2 \times 5^2)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]
 $\log(3601)=\log(13 \times 277)$ [$\log(13)$ $\log(277)$ known]
 $\log(13)=\log(13)$ [$\log(13)$ known]

page 21:

$\log(277)=\log(277)$ [$\log(277)$ known]
 $\log(3599)=\log(59 \times 61)$ [$\log(59)$ $\log(61)$ known]
 $\log(61)=\log(61)$ [$\log(61)$ known]
 $\log(59)=\log(59)$ [$\log(59)$ known]
decomposition(5900)
 $5900-1=17 \times 347$
→ allows the comp. of $\log(347)$
 $5900+1=3 \times 7 \times 281$
→ allows the comp. of $\log(281)$
 $\log(5900)=\log(2^2 \times 5^2 \times 59)$ [$\log(2)$ $\log(5)$ $\log(59)$ known]
 $\log(5901)=\log(3 \times 7 \times 281)$ [$\log(3)$ $\log(7)$ $\log(281)$ known]
 $\log(21)=\log(3 \times 7)$ [$\log(3)$ $\log(7)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

page 22:

$\log(281)=\log(281)$ [$\log(281)$ known]
 $\log(5899)=\log(17 \times 347)$ [$\log(17)$ $\log(347)$ known]
 $\log(17)=\log(17)$ [$\log(17)$ known]
 $\log(347)=\log(347)$ [$\log(347)$ known]
decomposition(59000)
 $59000-1=41 \times 1439$
→ allows the comp. of $\log(1439)$
 $59000+1=3 \times 71 \times 277$
→ allows the comp. of $\log(71)$
 $\log(59000)=\log(2^3 \times 5^3 \times 59)$ [$\log(2)$ $\log(5)$ $\log(59)$ known]
 $\log(59001)=\log(3 \times 71 \times 277)$ [$\log(3)$ $\log(71)$ $\log(277)$ known]
 $\log(277)=\log(277)$ [$\log(277)$ known]
 $\log(213)=\log(3 \times 71)$ [$\log(3)$ $\log(71)$ known]
 $\log(3)=\log(3)$ [$\log(3)$ known]
 $\log(71)=\log(71)$ [$\log(71)$ known]
 $\log(58999)=\log(41 \times 1439)$ [$\log(41)$ $\log(1439)$ known]
 $\log(41)=\log(41)$ [$\log(41)$ known]
 $\log(1439)=\log(1439)$ [$\log(1439)$ known]

page 23:

decomposition(4600)
 $4600-1=3^2 \times 7 \times 73$
→ allows the comp. of $\log(73)$
 $4600+1=43 \times 107$
→ allows the comp. of $\log(107)$
 $\log(4600)=\log(2^3 \times 5^2 \times 23)$ [$\log(2)$ $\log(5)$ $\log(23)$ known]
 $\log(4601)=\log(43 \times 107)$ [$\log(43)$ $\log(107)$ known]
 $\log(43)=\log(43)$ [$\log(43)$ known]
 $\log(107)=\log(107)$ [$\log(107)$ known]
 $\log(4599)=\log(3^2 \times 7 \times 73)$ [$\log(3)$ $\log(7)$ $\log(73)$ known]
 $\log(63)=\log(3^2 \times 7)$ [$\log(3)$ $\log(7)$ known]
 $\log(73)=\log(73)$ [$\log(73)$ known]

page 24:

decomposition(4400)
 $4400-1=53 \times 83$
→ allows the comp. of $\log(83)$
 $4400+1=3^3 \times 163$
→ allows the comp. of $\log(163)$
 $\log(4400)=\log(2^4 \times 5^2 \times 11)$ [$\log(2)$ $\log(5)$ $\log(11)$ known]
 $\log(4401)=\log(3^3 \times 163)$ [$\log(3)$ $\log(163)$ known]
 $\log(27)=\log(3^3)$ [$\log(3)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(163)=\log(163)$ [log(163) known]
 $\log(4399)=\log(53 \times 83)$ [log(53) log(83) known]
 $\log(53)=\log(53)$ [log(53) known]
 $\log(83)=\log(83)$ [log(83) known]

page 25:

decomposition(6500)
 $6500-1=67 \times 97$
→ allows the comp. of log(97)
 $6500+1=3 \times 11 \times 197$
→ allows the comp. of log(197)
 $\log(6500)=\log(2^2 \times 5^3 \times 13)$ [log(2) log(5) log(13) known]
 $\log(6501)=\log(3 \times 11 \times 197)$ [log(3) log(11) log(197) known]
 $\log(33)=\log(3 \times 11)$ [log(3) log(11) known]
 $\log(197)=\log(197)$ [log(197) known]
 $\log(6499)=\log(67 \times 97)$ [log(67) log(97) known]
 $\log(67)=\log(67)$ [log(67) known]
 $\log(97)=\log(97)$ [log(97) known]

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decomposition(10000)
 $10000-1=3^2 \times 11 \times 101$
→ allows the comp. of log(101)
 $10000+1=73 \times 137$
→ allows the comp. of log(137)
 $\log(10001)=\log(73 \times 137)$ [log(73) log(137) known]
 $\log(73)=\log(73)$ [log(73) known]
 $\log(137)=\log(137)$ [log(137) known]
 $\log(9999)=\log(3^2 \times 11 \times 101)$ [log(3) log(11) log(101) known]
 $\log(99)=\log(3^2 \times 11)$ [log(3) log(11) known]
 $\log(101)=\log(101)$ [log(101) known]

page 27:

decomposition(790)
 $790-1=3 \times 263$
→ allows the comp. of log(263)
 $790+1=7 \times 113$
→ allows the comp. of log(113)
 $\log(790)=\log(2 \times 5 \times 79)$ [log(2) log(5) log(79) known]
 $\log(791)=\log(7 \times 113)$ [log(7) log(113) known]
 $\log(7)=\log(7)$ [log(7) known]
 $\log(113)=\log(113)$ [log(113) known]

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$\log(789)=\log(3 \times 263)$ [log(3) log(263) known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(3)=\log(3)$ [$\log(3)$ known]
 $\log(263)=\log(263)$ [$\log(263)$ known]
decomposition(7900)
 $7900-1=3 \times 2633$
→ allows the comp. of $\log(2633)$
 $7900+1=7901$
→ allows the comp. of $\log(7901)$
 $\log(7900)=\log(2^2 \times 5^2 \times 79)$ [$\log(2)$ $\log(5)$ $\log(79)$ known]
 $\log(7901)=\log(7901)$ [$\log(7901)$ known]
 $\log(7899)=\log(3 \times 2633)$ [$\log(3)$ $\log(2633)$ known]
 $\log(3)=\log(3)$ [$\log(3)$ known]
 $\log(2633)=\log(2633)$ [$\log(2633)$ known]
decomposition(79000)
 $79000-1=3 \times 17 \times 1549$
→ allows the comp. of $\log(1549)$
 $79000+1=13 \times 59 \times 103$
→ allows the comp. of $\log(103)$

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$\log(79000)=\log(2^3 \times 5^3 \times 79)$ [$\log(2)$ $\log(5)$ $\log(79)$ known]
 $\log(79001)=\log(13 \times 59 \times 103)$ [$\log(13)$ $\log(59)$ $\log(103)$ known]
 $\log(767)=\log(13 \times 59)$ [$\log(13)$ $\log(59)$ known]
 $\log(103)=\log(103)$ [$\log(103)$ known]
 $\log(78999)=\log(3 \times 17 \times 1549)$ [$\log(3)$ $\log(17)$ $\log(1549)$ known]
 $\log(51)=\log(3 \times 17)$ [$\log(3)$ $\log(17)$ known]
 $\log(1549)=\log(1549)$ [$\log(1549)$ known]
decomposition(790000)
 $790000-1=3 \times 7 \times 37619$
 $790000+1=19 \times 41579$
 $\log(790000)=\log(2^4 \times 5^4 \times 79)$ [$\log(2)$ $\log(5)$ $\log(79)$ known]
 $\log(790001)=\log(19 \times 41579)$ [$\log(19)$ known]
 $\log(19)=\log(19)$ [$\log(19)$ known]
 $\log(41579)=\log(41579)$

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$\log(789999)=\log(3 \times 7 \times 37619)$ [$\log(3)$ $\log(7)$ known]
 $\log(21)=\log(3 \times 7)$ [$\log(3)$ $\log(7)$ known]
 $\log(37619)=\log(37619)$
decomposition(8000)
 $8000-1=19 \times 421$
→ allows the comp. of $\log(421)$
 $8000+1=3^2 \times 7 \times 127$
→ allows the comp. of $\log(127)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(8000)=\log(2^6 \times 5^3)$ [$\log(2)$ $\log(5)$ known]
 $\log(8001)=\log(3^2 \times 7 \times 127)$ [$\log(3)$ $\log(7)$ $\log(127)$ known]
 $\log(63)=\log(3^2 \times 7)$ [$\log(3)$ $\log(7)$ known]
 $\log(127)=\log(127)$ [$\log(127)$ known]
 $\log(7999)=\log(19 \times 421)$ [$\log(19)$ $\log(421)$ known]
 $\log(19)=\log(19)$ [$\log(19)$ known]
 $\log(421)=\log(421)$ [$\log(421)$ known]

decomposition(80000)

$80000-1=79999$

$80000+1=3^3 \times 2963$

→ allows the comp. of $\log(2963)$

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$\log(80000)=\log(2^7 \times 5^4)$ [$\log(2)$ $\log(5)$ known]

$\log(80001)=\log(3^3 \times 2963)$ [$\log(3)$ $\log(2963)$ known]

$\log(27)=\log(3^3)$ [$\log(3)$ known]

$\log(2963)=\log(2963)$ [$\log(2963)$ known]

$\log(79999)=\log(79999)$

decomposition(800000)

$800000-1=799999$

$800000+1=3^2 \times 103 \times 863$

→ allows the comp. of $\log(863)$

$\log(800000)=\log(2^8 \times 5^5)$ [$\log(2)$ $\log(5)$ known]

$\log(800001)=\log(3^2 \times 103 \times 863)$ [$\log(3)$ $\log(103)$ $\log(863)$ known]

$\log(927)=\log(3^2 \times 103)$ [$\log(3)$ $\log(103)$ known]

$\log(863)=\log(863)$ [$\log(863)$ known]

$\log(799999)=\log(799999)$

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decomposition(240)

$240-1=239$

→ allows the comp. of $\log(239)$

$240+1=241$

→ allows the comp. of $\log(241)$

$\log(240)=\log(2^4 \times 3 \times 5)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]

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$\log(239)=\log(239)$ [$\log(239)$ known]

$\log(241)=\log(241)$ [$\log(241)$ known]

decomposition(24000)

$24000-1=103 \times 233$

→ allows the comp. of $\log(233)$

$24000+1=24001$

$\log(24000)=\log(2^6 \times 3 \times 5^3)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(24001)=log(24001)
log(23999)=log(103 × 233) [log(103) log(233) known]
log(103)=log(103) [log(103) known]
log(233)=log(233) [log(233) known]
decomposition(240000)
  240000-1=239999
  240000+1=107 × 2243
    → allows the comp. of log(2243)
```

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```
log(240000)=log(27 × 3 × 54) [log(2) log(3) log(5) known]
log(240001)=log(107 × 2243) [log(107) log(2243) known]
log(107)=log(107) [log(107) known]
log(2243)=log(2243) [log(2243) known]
log(239999)=log(239999)
decomposition(2400000)
  2400000-1=7 × 53 × 6469
    → allows the comp. of log(6469)
  2400000+1=2400001
log(2400001)=log(2400001)
log(2399999)=log(7 × 53 × 6469) [log(7) log(53) log(6469) known]
log(371)=log(7 × 53) [log(7) log(53) known]
log(6469)=log(6469) [log(6469) known]
```

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```
decomposition(100000)
  100000-1=32 × 41 × 271
    → allows the comp. of log(271)
  100000+1=11 × 9091
    → allows the comp. of log(9091)
log(100001)=log(11 × 9091) [log(11) log(9091) known]
log(11)=log(11) [log(11) known]
log(9091)=log(9091) [log(9091) known]
log(99999)=log(32 × 41 × 271) [log(3) log(41) log(271) known]
log(369)=log(32 × 41) [log(3) log(41) known]
log(271)=log(271) [log(271) known]
decomposition(1000000)
  1000000-1=32 × 239 × 4649
    → allows the comp. of log(4649)
  1000000+1=11 × 909091
log(1000001)=log(11 × 909091) [log(11) known]
log(11)=log(11) [log(11) known]
log(909091)=log(909091)
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(9999999) = \log(3^2 \times 239 \times 4649)$ [$\log(3)$ $\log(239)$ $\log(4649)$ known]
 $\log(4649) = \log(4649)$ [$\log(4649)$ known]

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decomposition(40000)

$40000-1 = 3 \times 67 \times 199$

→ allows the comp. of $\log(199)$

$40000+1 = 13 \times 17 \times 181$

→ allows the comp. of $\log(181)$

$\log(40000) = \log(2^6 \times 5^4)$ [$\log(2)$ $\log(5)$ known]

$\log(40001) = \log(13 \times 17 \times 181)$ [$\log(13)$ $\log(17)$ $\log(181)$ known]

$\log(221) = \log(13 \times 17)$ [$\log(13)$ $\log(17)$ known]

$\log(181) = \log(181)$ [$\log(181)$ known]

$\log(39999) = \log(3 \times 67 \times 199)$ [$\log(3)$ $\log(67)$ $\log(199)$ known]

$\log(201) = \log(3 \times 67)$ [$\log(3)$ $\log(67)$ known]

$\log(199) = \log(199)$ [$\log(199)$ known]

decomposition(400000)

$400000-1 = 3 \times 151 \times 883$

$400000+1 = 7 \times 57143$

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$\log(400000) = \log(2^7 \times 5^5)$ [$\log(2)$ $\log(5)$ known]

$\log(400001) = \log(7 \times 57143)$ [$\log(7)$ known]

$\log(7) = \log(7)$ [$\log(7)$ known]

$\log(57143) = \log(57143)$

$\log(399999) = \log(3 \times 151 \times 883)$ [$\log(3)$ known]

$\log(3) = \log(3)$ [$\log(3)$ known]

$\log(133333) = \log(151 \times 883)$

decomposition(25000)

$25000-1 = 3 \times 13 \times 641$

→ allows the comp. of $\log(641)$

$25000+1 = 23 \times 1087$

→ allows the comp. of $\log(1087)$

$\log(25000) = \log(2^3 \times 5^5)$ [$\log(2)$ $\log(5)$ known]

$\log(25001) = \log(23 \times 1087)$ [$\log(23)$ $\log(1087)$ known]

$\log(23) = \log(23)$ [$\log(23)$ known]

$\log(1087) = \log(1087)$ [$\log(1087)$ known]

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$\log(24999) = \log(3 \times 13 \times 641)$ [$\log(3)$ $\log(13)$ $\log(641)$ known]

$\log(39) = \log(3 \times 13)$ [$\log(3)$ $\log(13)$ known]

$\log(641) = \log(641)$ [$\log(641)$ known]

decomposition(2500000)

$2500000-1 = 3 \times 191 \times 4363$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
2500000+1=7 × 19 × 18797
log(2500000)=log(25 × 57) [log(2) log(5) known]
log(2500001)=log(7 × 19 × 18797) [log(7) log(19) known]
log(133)=log(7 × 19) [log(7) log(19) known]
log(18797)=log(18797)
log(2499999)=log(3 × 191 × 4363) [log(3) known]
log(3)=log(3) [log(3) known]
log(833333)=log(191 × 4363)
decomposition(3000)
3000-1=2999
→ allows the comp. of log(2999)
3000+1=3001
→ allows the comp. of log(3001)
```

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```
log(3000)=log(23 × 3 × 53) [log(2) log(3) log(5) known]
log(3001)=log(3001) [log(3001) known]
log(2999)=log(2999) [log(2999) known]
decomposition(30000)
30000-1=131 × 229
30000+1=19 × 1579
→ allows the comp. of log(1579)
log(30000)=log(24 × 3 × 54) [log(2) log(3) log(5) known]
log(30001)=log(19 × 1579) [log(19) log(1579) known]
log(19)=log(19) [log(19) known]
log(1579)=log(1579) [log(1579) known]
log(29999)=log(131 × 229)
```

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```
decomposition(300000)
300000-1=7 × 17 × 2521
→ allows the comp. of log(2521)
300000+1=13 × 47 × 491
→ allows the comp. of log(491)
log(300000)=log(25 × 3 × 55) [log(2) log(3) log(5) known]
log(300001)=log(13 × 47 × 491) [log(13) log(47) log(491) known]
log(611)=log(13 × 47) [log(13) log(47) known]
log(491)=log(491) [log(491) known]
log(299999)=log(7 × 17 × 2521) [log(7) log(17) log(2521) known]
log(119)=log(7 × 17) [log(7) log(17) known]
log(2521)=log(2521) [log(2521) known]
decomposition(3000000)
3000000-1=2999999
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$3000000+1=853 \times 3517$$

$$\log(3000000)=\log(2^6 \times 3 \times 5^6) \text{ [log(2) log(3) log(5) known]}$$

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$$\log(3000001)=\log(853 \times 3517)$$

$$\log(2999999)=\log(2999999)$$

decomposition(270000)

$$270000-1=83 \times 3253$$

→ allows the comp. of $\log(3253)$

$$270000+1=270001$$

$$\log(270000)=\log(2^4 \times 3^3 \times 5^4) \text{ [log(2) log(3) log(5) known]}$$

$$\log(270001)=\log(270001)$$

$$\log(269999)=\log(83 \times 3253) \text{ [log(83) log(3253) known]}$$

$$\log(83)=\log(83) \text{ [log(83) known]}$$

$$\log(3253)=\log(3253) \text{ [log(3253) known]}$$

decomposition(9000)

$$9000-1=8999$$

→ allows the comp. of $\log(8999)$

$$9000+1=9001$$

→ allows the comp. of $\log(9001)$

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$$\log(9000)=\log(2^3 \times 3^2 \times 5^3) \text{ [log(2) log(3) log(5) known]}$$

$$\log(9001)=\log(9001) \text{ [log(9001) known]}$$

$$\log(8999)=\log(8999) \text{ [log(8999) known]}$$

decomposition(900000)

$$900000-1=397 \times 2267$$

$$900000+1=900001$$

$$\log(900000)=\log(2^5 \times 3^2 \times 5^5) \text{ [log(2) log(3) log(5) known]}$$

$$\log(900001)=\log(900001)$$

$$\log(899999)=\log(397 \times 2267)$$

decomposition(36000)

$$36000-1=35999$$

$$36000+1=7 \times 37 \times 139$$

→ allows the comp. of $\log(139)$

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$$\log(36000)=\log(2^5 \times 3^2 \times 5^3) \text{ [log(2) log(3) log(5) known]}$$

$$\log(36001)=\log(7 \times 37 \times 139) \text{ [log(7) log(37) log(139) known]}$$

$$\log(259)=\log(7 \times 37) \text{ [log(7) log(37) known]}$$

$$\log(139)=\log(139) \text{ [log(139) known]}$$

$$\log(35999)=\log(35999)$$

decomposition(360000)

$$360000-1=599 \times 601$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$360000+1=157 \times 2293$
 $\log(360000)=\log(2^6 \times 3^2 \times 5^4)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]
 $\log(360001)=\log(157 \times 2293)$
 $\log(359999)=\log(599 \times 601)$
decomposition(590000)
 $590000-1=191 \times 3089$
 $590000+1=3 \times 193 \times 1019$

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$\log(590000)=\log(2^4 \times 5^4 \times 59)$ [$\log(2)$ $\log(5)$ $\log(59)$ known]
 $\log(590001)=\log(3 \times 193 \times 1019)$ [$\log(3)$ known]
 $\log(3)=\log(3)$ [$\log(3)$ known]
 $\log(196667)=\log(193 \times 1019)$
 $\log(589999)=\log(191 \times 3089)$
decomposition(46000)
 $46000-1=3^2 \times 19 \times 269$
→ allows the comp. of $\log(269)$
 $46000+1=157 \times 293$
 $\log(46000)=\log(2^4 \times 5^3 \times 23)$ [$\log(2)$ $\log(5)$ $\log(23)$ known]
 $\log(46001)=\log(157 \times 293)$
 $\log(45999)=\log(3^2 \times 19 \times 269)$ [$\log(3)$ $\log(19)$ $\log(269)$ known]
 $\log(171)=\log(3^2 \times 19)$ [$\log(3)$ $\log(19)$ known]
 $\log(269)=\log(269)$ [$\log(269)$ known]

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decomposition(460000)
 $460000-1=3^6 \times 631$
→ allows the comp. of $\log(631)$
 $460000+1=61 \times 7541$
→ allows the comp. of $\log(7541)$
 $\log(460000)=\log(2^5 \times 5^4 \times 23)$ [$\log(2)$ $\log(5)$ $\log(23)$ known]
 $\log(460001)=\log(61 \times 7541)$ [$\log(61)$ $\log(7541)$ known]
 $\log(61)=\log(61)$ [$\log(61)$ known]
 $\log(7541)=\log(7541)$ [$\log(7541)$ known]
 $\log(459999)=\log(3^6 \times 631)$ [$\log(3)$ $\log(631)$ known]
 $\log(729)=\log(3^6)$ [$\log(3)$ known]
 $\log(631)=\log(631)$ [$\log(631)$ known]

decomposition(44000)

$44000-1=23 \times 1913$
→ allows the comp. of $\log(1913)$
 $44000+1=3^2 \times 4889$
→ allows the comp. of $\log(4889)$

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Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(44000)=\log(2^5 \times 5^3 \times 11)$ [$\log(2)$ $\log(5)$ $\log(11)$ known]
 $\log(44001)=\log(3^2 \times 4889)$ [$\log(3)$ $\log(4889)$ known]
 $\log(9)=\log(3^2)$ [$\log(3)$ known]
 $\log(4889)=\log(4889)$ [$\log(4889)$ known]
 $\log(43999)=\log(23 \times 1913)$ [$\log(23)$ $\log(1913)$ known]
 $\log(23)=\log(23)$ [$\log(23)$ known]
 $\log(1913)=\log(1913)$ [$\log(1913)$ known]
decomposition(65000)
 $65000-1=11 \times 19 \times 311$
→ allows the comp. of $\log(311)$
 $65000+1=3 \times 47 \times 461$
→ allows the comp. of $\log(461)$
 $\log(65000)=\log(2^3 \times 5^4 \times 13)$ [$\log(2)$ $\log(5)$ $\log(13)$ known]
 $\log(65001)=\log(3 \times 47 \times 461)$ [$\log(3)$ $\log(47)$ $\log(461)$ known]
 $\log(141)=\log(3 \times 47)$ [$\log(3)$ $\log(47)$ known]
 $\log(461)=\log(461)$ [$\log(461)$ known]
 $\log(64999)=\log(11 \times 19 \times 311)$ [$\log(11)$ $\log(19)$ $\log(311)$ known]
 $\log(209)=\log(11 \times 19)$ [$\log(11)$ $\log(19)$ known]

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$\log(311)=\log(311)$ [$\log(311)$ known]
decomposition(650000)
 $650000-1=7 \times 92857$
 $650000+1=3 \times 11 \times 19697$
 $\log(650000)=\log(2^4 \times 5^5 \times 13)$ [$\log(2)$ $\log(5)$ $\log(13)$ known]
 $\log(650001)=\log(3 \times 11 \times 19697)$ [$\log(3)$ $\log(11)$ known]
 $\log(33)=\log(3 \times 11)$ [$\log(3)$ $\log(11)$ known]
 $\log(19697)=\log(19697)$
 $\log(649999)=\log(7 \times 92857)$ [$\log(7)$ known]
 $\log(7)=\log(7)$ [$\log(7)$ known]
 $\log(92857)=\log(92857)$

decomposition(9300)

$9300-1=17 \times 547$
→ allows the comp. of $\log(547)$
 $9300+1=71 \times 131$
→ allows the comp. of $\log(131)$

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$\log(9300)=\log(2^2 \times 3 \times 5^2 \times 31)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(31)$ known]
 $\log(9301)=\log(71 \times 131)$ [$\log(71)$ $\log(131)$ known]
 $\log(71)=\log(71)$ [$\log(71)$ known]
 $\log(131)=\log(131)$ [$\log(131)$ known]
 $\log(29999)=\log(131 \times 229)$ [$\log(131)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(229)$ (assumed to be known now)
 $\log(9299)=\log(17 \times 547)$ [$\log(17)$ $\log(547)$ known]
 $\log(17)=\log(17)$ [$\log(17)$ known]
 $\log(547)=\log(547)$ [$\log(547)$ known]
decomposition(93000)
 $93000-1=113 \times 823$
→ allows the comp. of $\log(823)$
 $93000+1=93001$

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$\log(93000)=\log(2^3 \times 3 \times 5^3 \times 31)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(31)$ known]
 $\log(93001)=\log(93001)$
 $\log(92999)=\log(113 \times 823)$ [$\log(113)$ $\log(823)$ known]
 $\log(113)=\log(113)$ [$\log(113)$ known]
 $\log(823)=\log(823)$ [$\log(823)$ known]
decomposition(930000)
 $930000-1=7 \times 132857$
 $930000+1=29 \times 32069$
 $\log(930000)=\log(2^4 \times 3 \times 5^4 \times 31)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(31)$ known]
 $\log(930001)=\log(29 \times 32069)$ [$\log(29)$ known]
 $\log(29)=\log(29)$ [$\log(29)$ known]
 $\log(32069)=\log(32069)$

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$\log(929999)=\log(7 \times 132857)$ [$\log(7)$ known]
 $\log(7)=\log(7)$ [$\log(7)$ known]
 $\log(132857)=\log(132857)$
decomposition(7300)
 $7300-1=3^2 \times 811$
→ allows the comp. of $\log(811)$
 $7300+1=7^2 \times 149$
→ allows the comp. of $\log(149)$
 $\log(7300)=\log(2^2 \times 5^2 \times 73)$ [$\log(2)$ $\log(5)$ $\log(73)$ known]
 $\log(7301)=\log(7^2 \times 149)$ [$\log(7)$ $\log(149)$ known]
 $\log(49)=\log(7^2)$ [$\log(7)$ known]
 $\log(149)=\log(149)$ [$\log(149)$ known]

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$\log(7299)=\log(3^2 \times 811)$ [$\log(3)$ $\log(811)$ known]
 $\log(9)=\log(3^2)$ [$\log(3)$ known]
 $\log(811)=\log(811)$ [$\log(811)$ known]
decomposition(73000)
 $73000-1=3^2 \times 8111$
→ allows the comp. of $\log(8111)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$73000+1=37 \times 1973$$

→ allows the comp. of $\log(1973)$

$$\log(73000)=\log(2^3 \times 5^3 \times 73) [\log(2) \log(5) \log(73) \text{ known}]$$

$$\log(73001)=\log(37 \times 1973) [\log(37) \log(1973) \text{ known}]$$

$$\log(37)=\log(37) [\log(37) \text{ known}]$$

$$\log(1973)=\log(1973) [\log(1973) \text{ known}]$$

$$\log(72999)=\log(3^2 \times 8111) [\log(3) \log(8111) \text{ known}]$$

$$\log(9)=\log(3^2) [\log(3) \text{ known}]$$

$$\log(8111)=\log(8111) [\log(8111) \text{ known}]$$

decomposition(730000)

$$730000-1=3^3 \times 19 \times 1423$$

→ allows the comp. of $\log(1423)$

$$730000+1=823 \times 887$$

→ allows the comp. of $\log(887)$

page 52:

$$\log(730000)=\log(2^4 \times 5^4 \times 73) [\log(2) \log(5) \log(73) \text{ known}]$$

$$\log(730001)=\log(823 \times 887) [\log(823) \log(887) \text{ known}]$$

$$\log(823)=\log(823) [\log(823) \text{ known}]$$

$$\log(887)=\log(887) [\log(887) \text{ known}]$$

$$\log(729999)=\log(3^3 \times 19 \times 1423) [\log(3) \log(19) \log(1423) \text{ known}]$$

$$\log(513)=\log(3^3 \times 19) [\log(3) \log(19) \text{ known}]$$

$$\log(1423)=\log(1423) [\log(1423) \text{ known}]$$

decomposition(46800)

$$46800-1=53 \times 883$$

→ allows the comp. of $\log(883)$

$$46800+1=17 \times 2753$$

→ allows the comp. of $\log(2753)$

page 53:

$$\log(46800)=\log(2^4 \times 3^2 \times 5^2 \times 13) [\log(2) \log(3) \log(5) \log(13) \text{ known}]$$

$$\log(46801)=\log(17 \times 2753) [\log(17) \log(2753) \text{ known}]$$

$$\log(17)=\log(17) [\log(17) \text{ known}]$$

$$\log(2753)=\log(2753) [\log(2753) \text{ known}]$$

$$\log(46799)=\log(53 \times 883) [\log(53) \log(883) \text{ known}]$$

$$\log(53)=\log(53) [\log(53) \text{ known}]$$

$$\log(883)=\log(883) [\log(883) \text{ known}]$$

$$\log(133333)=\log(151 \times 883) [\log(883) \text{ known}]$$

$$\log(151) \quad (\text{assumed to be known now})$$

decomposition(111000)

$$111000-1=7 \times 101 \times 157$$

→ allows the comp. of $\log(157)$

$$111000+1=11 \times 10091$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

page 54:

$\log(111000)=\log(2^3 \times 3 \times 5^3 \times 37)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(37)$ known]

$\log(111001)=\log(11 \times 10091)$ [$\log(11)$ known]

$\log(11)=\log(11)$ [$\log(11)$ known]

$\log(10091)=\log(10091)$

$\log(110999)=\log(7 \times 101 \times 157)$ [$\log(7)$ $\log(101)$ $\log(157)$ known]

$\log(707)=\log(7 \times 101)$ [$\log(7)$ $\log(101)$ known]

$\log(157)=\log(157)$ [$\log(157)$ known]

decomposition(1110000)

$1110000-1=11 \times 19 \times 47 \times 113$

$1110000+1=151 \times 7351$

→ allows the comp. of $\log(7351)$

$\log(1110000)=\log(2^4 \times 3 \times 5^4 \times 37)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(37)$ known]

$\log(1110001)=\log(151 \times 7351)$ [$\log(151)$ $\log(7351)$ known]

$\log(151)=\log(151)$ [$\log(151)$ known]

$\log(7351)=\log(7351)$ [$\log(7351)$ known]

page 55:

$\log(1109999)=\log(11 \times 19 \times 47 \times 113)$ [$\log(11)$ $\log(19)$ $\log(47)$ $\log(113)$ known]

$\log(360001)=\log(157 \times 2293)$ [$\log(157)$ known]

$\log(157)=\log(157)$ [$\log(157)$ known]

$\log(46001)=\log(157 \times 293)$ [$\log(157)$ known]

$\log(2293)$ (assumed to be known now)

$\log(293)$ (assumed to be known now)

page 56:

decomposition(500)

$500-1=499$

→ allows the comp. of $\log(499)$

$500+1=3 \times 167$

→ allows the comp. of $\log(167)$

$\log(500)=\log(2^2 \times 5^3)$ [$\log(2)$ $\log(5)$ known]

$\log(501)=\log(3 \times 167)$ [$\log(3)$ $\log(167)$ known]

$\log(3)=\log(3)$ [$\log(3)$ known]

$\log(167)=\log(167)$ [$\log(167)$ known]

$\log(499)=\log(499)$ [$\log(499)$ known]

decomposition(5000)

$5000-1=4999$

→ allows the comp. of $\log(4999)$

$5000+1=3 \times 1667$

→ allows the comp. of $\log(1667)$

$\log(5000)=\log(2^3 \times 5^4)$ [$\log(2)$ $\log(5)$ known]

$\log(5001)=\log(3 \times 1667)$ [$\log(3)$ $\log(1667)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(3)=\log(3)$ [log(3) known]
 $\log(1667)=\log(1667)$ [log(1667) known]
 $\log(4999)=\log(4999)$ [log(4999) known]

page 57:

decomposition(50000)
50000-1=49999
50000+1=3 × 7 × 2381
→ allows the comp. of log(2381)
 $\log(50000)=\log(2^4 \times 5^5)$ [log(2) log(5) known]
 $\log(50001)=\log(3 \times 7 \times 2381)$ [log(3) log(7) log(2381) known]
 $\log(3)=\log(3)$ [log(3) known]
 $\log(16667)=\log(7 \times 2381)$ [log(7) log(2381) known]
 $\log(7)=\log(7)$ [log(7) known]
 $\log(2381)=\log(2381)$ [log(2381) known]
 $\log(49999)=\log(49999)$
decomposition(132000)
132000-1=7 × 109 × 173
→ allows the comp. of log(173)
132000+1=132001

page 58:

$\log(132000)=\log(2^5 \times 3 \times 5^3 \times 11)$ [log(2) log(3) log(5) log(11) known]
 $\log(132001)=\log(132001)$
 $\log(131999)=\log(7 \times 109 \times 173)$ [log(7) log(109) log(173) known]
 $\log(763)=\log(7 \times 109)$ [log(7) log(109) known]
 $\log(173)=\log(173)$ [log(173) known]
decomposition(1320000)
1320000-1=17 × 77647
1320000+1=191 × 6911
 $\log(1320000)=\log(2^6 \times 3 \times 5^4 \times 11)$ [log(2) log(3) log(5) log(11) known]
 $\log(1320001)=\log(191 \times 6911)$
 $\log(1319999)=\log(17 \times 77647)$ [log(17) known]
 $\log(17)=\log(17)$ [log(17) known]
 $\log(77647)=\log(77647)$

page 59:

decomposition(14500)
14500-1=3⁴ × 179
→ allows the comp. of log(179)
14500+1=17 × 853
→ allows the comp. of log(853)
 $\log(14500)=\log(2^2 \times 5^3 \times 29)$ [log(2) log(5) log(29) known]
 $\log(14501)=\log(17 \times 853)$ [log(17) log(853) known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(17)=\log(17)$ [log(17) known]
 $\log(3000001)=\log(853 \times 3517)$ [log(853) known]
 $\log(853)=\log(853)$ [log(853) known]
 $\log(14499)=\log(3^4 \times 179)$ [log(3) log(179) known]
 $\log(81)=\log(3^4)$ [log(3) known]
 $\log(179)=\log(179)$ [log(179) known]
 $\log(3517)$ (assumed to be known now)

page 60:

decomposition(145000)
 $145000-1=3^2 \times 16111$
 $145000+1=83 \times 1747$
→ allows the comp. of $\log(1747)$
 $\log(145000)=\log(2^3 \times 5^4 \times 29)$ [log(2) log(5) log(29) known]
 $\log(145001)=\log(83 \times 1747)$ [log(83) log(1747) known]
 $\log(83)=\log(83)$ [log(83) known]
 $\log(1747)=\log(1747)$ [log(1747) known]
 $\log(144999)=\log(3^2 \times 16111)$ [log(3) known]
 $\log(9)=\log(3^2)$ [log(3) known]
 $\log(16111)=\log(16111)$
decomposition(1450000)
 $1450000-1=3^2 \times 73 \times 2207$
→ allows the comp. of $\log(2207)$
 $1450000+1=7 \times 359 \times 577$

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$\log(1450000)=\log(2^4 \times 5^5 \times 29)$ [log(2) log(5) log(29) known]
 $\log(1450001)=\log(7 \times 359 \times 577)$ [log(7) known]
 $\log(7)=\log(7)$ [log(7) known]
 $\log(207143)=\log(359 \times 577)$
 $\log(1449999)=\log(3^2 \times 73 \times 2207)$ [log(3) log(73) log(2207) known]
 $\log(657)=\log(3^2 \times 73)$ [log(3) log(73) known]
 $\log(2207)=\log(2207)$ [log(2207) known]

decomposition(17000)

$17000-1=89 \times 191$
→ allows the comp. of $\log(191)$
 $17000+1=3^2 \times 1889$
→ allows the comp. of $\log(1889)$

$\log(17000)=\log(2^3 \times 5^3 \times 17)$ [log(2) log(5) log(17) known]

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$\log(17001)=\log(3^2 \times 1889)$ [log(3) log(1889) known]
 $\log(9)=\log(3^2)$ [log(3) known]
 $\log(1889)=\log(1889)$ [log(1889) known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\log(16999)=\log(89 \times 191) \text{ [log(89) log(191) known]}$$

$$\log(89)=\log(89) \text{ [log(89) known]}$$

$$\log(191)=\log(191) \text{ [log(191) known]}$$

$$\log(833333)=\log(191 \times 4363) \text{ [log(191) known]}$$

$$\log(589999)=\log(191 \times 3089) \text{ [log(191) known]}$$

$$\log(1320001)=\log(191 \times 6911) \text{ [log(191) known]}$$

$$\log(4363) \quad (\text{assumed to be known now})$$

$$\log(3089) \quad (\text{assumed to be known now})$$

$$\log(6911) \quad (\text{assumed to be known now})$$

decomposition(170000)

$$170000-1=47 \times 3617$$

→ allows the comp. of $\log(3617)$

$$170000+1=3^2 \times 13 \times 1453$$

→ allows the comp. of $\log(1453)$

$$\log(170000)=\log(2^4 \times 5^4 \times 17) \text{ [log(2) log(5) log(17) known]}$$

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$$\log(170001)=\log(3^2 \times 13 \times 1453) \text{ [log(3) log(13) log(1453) known]}$$

$$\log(9)=\log(3^2) \text{ [log(3) known]}$$

$$\log(18889)=\log(13 \times 1453) \text{ [log(13) log(1453) known]}$$

$$\log(13)=\log(13) \text{ [log(13) known]}$$

$$\log(1453)=\log(1453) \text{ [log(1453) known]}$$

$$\log(169999)=\log(47 \times 3617) \text{ [log(47) log(3617) known]}$$

$$\log(47)=\log(47) \text{ [log(47) known]}$$

$$\log(3617)=\log(3617) \text{ [log(3617) known]}$$

decomposition(1700000)

$$1700000-1=7 \times 23 \times 10559$$

$$1700000+1=3^3 \times 79 \times 797$$

→ allows the comp. of $\log(797)$

$$\log(1700000)=\log(2^5 \times 5^5 \times 17) \text{ [log(2) log(5) log(17) known]}$$

$$\log(1700001)=\log(3^3 \times 79 \times 797) \text{ [log(3) log(79) log(797) known]}$$

$$\log(27)=\log(3^3) \text{ [log(3) known]}$$

$$\log(62963)=\log(79 \times 797) \text{ [log(79) log(797) known]}$$

$$\log(79)=\log(79) \text{ [log(79) known]}$$

$$\log(797)=\log(797) \text{ [log(797) known]}$$

$$\log(1699999)=\log(7 \times 23 \times 10559) \text{ [log(7) log(23) known]}$$

$$\log(161)=\log(7 \times 23) \text{ [log(7) log(23) known]}$$

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$$\log(10559)=\log(10559)$$

decomposition(11000)

$$11000-1=17 \times 647$$

→ allows the comp. of $\log(647)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$11000+1=3 \times 19 \times 193$$

→ allows the comp. of $\log(193)$

$$\log(11000)=\log(2^3 \times 5^3 \times 11) [\log(2) \log(5) \log(11) \text{ known}]$$

$$\log(11001)=\log(3 \times 19 \times 193) [\log(3) \log(19) \log(193) \text{ known}]$$

$$\log(57)=\log(3 \times 19) [\log(3) \log(19) \text{ known}]$$

$$\log(193)=\log(193) [\log(193) \text{ known}]$$

$$\log(196667)=\log(193 \times 1019) [\log(193) \text{ known}]$$

$$\log(1019) \quad (\text{assumed to be known now})$$

$$\log(10999)=\log(17 \times 647) [\log(17) \log(647) \text{ known}]$$

$$\log(17)=\log(17) [\log(17) \text{ known}]$$

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$$\log(647)=\log(647) [\log(647) \text{ known}]$$

decomposition(110000)

$$110000-1=317 \times 347$$

→ allows the comp. of $\log(317)$

$$110000+1=3 \times 37 \times 991$$

→ allows the comp. of $\log(991)$

$$\log(110000)=\log(2^4 \times 5^4 \times 11) [\log(2) \log(5) \log(11) \text{ known}]$$

$$\log(110001)=\log(3 \times 37 \times 991) [\log(3) \log(37) \log(991) \text{ known}]$$

$$\log(111)=\log(3 \times 37) [\log(3) \log(37) \text{ known}]$$

$$\log(991)=\log(991) [\log(991) \text{ known}]$$

$$\log(109999)=\log(317 \times 347) [\log(317) \log(347) \text{ known}]$$

$$\log(347)=\log(347) [\log(347) \text{ known}]$$

$$\log(317)=\log(317) [\log(317) \text{ known}]$$

decomposition(1100000)

$$1100000-1=29 \times 83 \times 457$$

→ allows the comp. of $\log(457)$

$$1100000+1=3 \times 7^3 \times 1069$$

→ allows the comp. of $\log(1069)$

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$$\log(1100000)=\log(2^5 \times 5^5 \times 11) [\log(2) \log(5) \log(11) \text{ known}]$$

$$\log(1100001)=\log(3 \times 7^3 \times 1069) [\log(3) \log(7) \log(1069) \text{ known}]$$

$$\log(1029)=\log(3 \times 7^3) [\log(3) \log(7) \text{ known}]$$

$$\log(1069)=\log(1069) [\log(1069) \text{ known}]$$

$$\log(1099999)=\log(29 \times 83 \times 457) [\log(29) \log(83) \log(457) \text{ known}]$$

$$\log(2407)=\log(29 \times 83) [\log(29) \log(83) \text{ known}]$$

$$\log(457)=\log(457) [\log(457) \text{ known}]$$

decomposition(2900)

$$2900-1=13 \times 223$$

→ allows the comp. of $\log(223)$

$$2900+1=3 \times 967$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ allows the comp. of $\log(967)$

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$\log(2900)=\log(2^2 \times 5^2 \times 29)$ [$\log(2)$ $\log(5)$ $\log(29)$ known]

$\log(2901)=\log(3 \times 967)$ [$\log(3)$ $\log(967)$ known]

$\log(3)=\log(3)$ [$\log(3)$ known]

$\log(967)=\log(967)$ [$\log(967)$ known]

$\log(2899)=\log(13 \times 223)$ [$\log(13)$ $\log(223)$ known]

$\log(13)=\log(13)$ [$\log(13)$ known]

$\log(223)=\log(223)$ [$\log(223)$ known]

decomposition(29000)

$29000-1=47 \times 617$

→ allows the comp. of $\log(617)$

$29000+1=3 \times 7 \times 1381$

→ allows the comp. of $\log(1381)$

$\log(29000)=\log(2^3 \times 5^3 \times 29)$ [$\log(2)$ $\log(5)$ $\log(29)$ known]

$\log(29001)=\log(3 \times 7 \times 1381)$ [$\log(3)$ $\log(7)$ $\log(1381)$ known]

$\log(21)=\log(3 \times 7)$ [$\log(3)$ $\log(7)$ known]

$\log(1381)=\log(1381)$ [$\log(1381)$ known]

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$\log(28999)=\log(47 \times 617)$ [$\log(47)$ $\log(617)$ known]

$\log(47)=\log(47)$ [$\log(47)$ known]

$\log(617)=\log(617)$ [$\log(617)$ known]

decomposition(37000)

$37000-1=3^2 \times 4111$

→ allows the comp. of $\log(4111)$

$37000+1=163 \times 227$

→ allows the comp. of $\log(227)$

$\log(37000)=\log(2^3 \times 5^3 \times 37)$ [$\log(2)$ $\log(5)$ $\log(37)$ known]

$\log(37001)=\log(163 \times 227)$ [$\log(163)$ $\log(227)$ known]

$\log(163)=\log(163)$ [$\log(163)$ known]

$\log(227)=\log(227)$ [$\log(227)$ known]

$\log(36999)=\log(3^2 \times 4111)$ [$\log(3)$ $\log(4111)$ known]

$\log(9)=\log(3^2)$ [$\log(3)$ known]

$\log(4111)=\log(4111)$ [$\log(4111)$ known]

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decomposition(370000)

$370000-1=3^2 \times 7^2 \times 839$

→ allows the comp. of $\log(839)$

$370000+1=23 \times 16087$

$\log(370000)=\log(2^4 \times 5^4 \times 37)$ [$\log(2)$ $\log(5)$ $\log(37)$ known]

$\log(370001)=\log(23 \times 16087)$ [$\log(23)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(23)=\log(23)$ [$\log(23)$ known]
 $\log(16087)=\log(16087)$
 $\log(369999)=\log(3^2 \times 7^2 \times 839)$ [$\log(3)$ $\log(7)$ $\log(839)$ known]
 $\log(9)=\log(3^2)$ [$\log(3)$ known]
 $\log(41111)=\log(7^2 \times 839)$ [$\log(7)$ $\log(839)$ known]
 $\log(49)=\log(7^2)$ [$\log(7)$ known]
 $\log(839)=\log(839)$ [$\log(839)$ known]
decomposition(6300)
6300-1=6299
→ allows the comp. of $\log(6299)$
6300+1=6301
→ allows the comp. of $\log(6301)$

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$\log(6300)=\log(2^2 \times 3^2 \times 5^2 \times 7)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(7)$ known]
 $\log(6301)=\log(6301)$ [$\log(6301)$ known]
 $\log(6299)=\log(6299)$ [$\log(6299)$ known]
decomposition(63000)
63000-1=73 \times 863
63000+1=251²
→ allows the comp. of $\log(251)$
 $\log(63000)=\log(2^3 \times 3^2 \times 5^3 \times 7)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(7)$ known]
 $\log(63001)=\log(251^2)$ [$\log(251)$ known]
 $\log(251)=\log(251)$ [$\log(251)$ known]

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$\log(62999)=\log(73 \times 863)$ [$\log(73)$ $\log(863)$ known]
 $\log(73)=\log(73)$ [$\log(73)$ known]
 $\log(863)=\log(863)$ [$\log(863)$ known]
decomposition(630000)
630000-1=37 \times 17027
630000+1=67 \times 9403
→ allows the comp. of $\log(9403)$
 $\log(630000)=\log(2^4 \times 3^2 \times 5^4 \times 7)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(7)$ known]
 $\log(630001)=\log(67 \times 9403)$ [$\log(67)$ $\log(9403)$ known]
 $\log(67)=\log(67)$ [$\log(67)$ known]
 $\log(9403)=\log(9403)$ [$\log(9403)$ known]
 $\log(629999)=\log(37 \times 17027)$ [$\log(37)$ known]
 $\log(37)=\log(37)$ [$\log(37)$ known]
 $\log(17027)=\log(17027)$
decomposition(1800)
1800-1=7 \times 257
→ allows the comp. of $\log(257)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$1800+1=1801$$

→ allows the comp. of $\log(1801)$

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$$\log(1800)=\log(2^3 \times 3^2 \times 5^2) \text{ [log(2) log(3) log(5) known]}$$

$$\log(1801)=\log(1801) \text{ [log(1801) known]}$$

$$\log(1799)=\log(7 \times 257) \text{ [log(7) log(257) known]}$$

$$\log(7)=\log(7) \text{ [log(7) known]}$$

$$\log(257)=\log(257) \text{ [log(257) known]}$$

decomposition(18000)

$$18000-1=41 \times 439$$

→ allows the comp. of $\log(439)$

$$18000+1=47 \times 383$$

→ allows the comp. of $\log(383)$

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$$\log(18000)=\log(2^4 \times 3^2 \times 5^3) \text{ [log(2) log(3) log(5) known]}$$

$$\log(18001)=\log(47 \times 383) \text{ [log(47) log(383) known]}$$

$$\log(47)=\log(47) \text{ [log(47) known]}$$

$$\log(383)=\log(383) \text{ [log(383) known]}$$

$$\log(17999)=\log(41 \times 439) \text{ [log(41) log(439) known]}$$

$$\log(41)=\log(41) \text{ [log(41) known]}$$

$$\log(439)=\log(439) \text{ [log(439) known]}$$

decomposition(1800000)

$$1800000-1=1799999$$

$$1800000+1=7 \times 29 \times 8867$$

→ allows the comp. of $\log(8867)$

$$\log(1800000)=\log(2^6 \times 3^2 \times 5^5) \text{ [log(2) log(3) log(5) known]}$$

$$\log(1800001)=\log(7 \times 29 \times 8867) \text{ [log(7) log(29) log(8867) known]}$$

$$\log(203)=\log(7 \times 29) \text{ [log(7) log(29) known]}$$

$$\log(8867)=\log(8867) \text{ [log(8867) known]}$$

decomposition(15000)

$$15000-1=53 \times 283$$

→ allows the comp. of $\log(283)$

$$15000+1=7 \times 2143$$

→ allows the comp. of $\log(2143)$

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$$\log(15000)=\log(2^3 \times 3 \times 5^4) \text{ [log(2) log(3) log(5) known]}$$

$$\log(15001)=\log(7 \times 2143) \text{ [log(7) log(2143) known]}$$

$$\log(7)=\log(7) \text{ [log(7) known]}$$

$$\log(2143)=\log(2143) \text{ [log(2143) known]}$$

$$\log(14999)=\log(53 \times 283) \text{ [log(53) log(283) known]}$$

$$\log(53)=\log(53) \text{ [log(53) known]}$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(283)=\log(283)$ [$\log(283)$ known]
decomposition(150000)
 $150000-1=61 \times 2459$
→ allows the comp. of $\log(2459)$
 $150000+1=150001$

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$\log(150000)=\log(2^4 \times 3 \times 5^5)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]
 $\log(150001)=\log(150001)$
 $\log(149999)=\log(61 \times 2459)$ [$\log(61)$ $\log(2459)$ known]
 $\log(61)=\log(61)$ [$\log(61)$ known]
 $\log(2459)=\log(2459)$ [$\log(2459)$ known]
decomposition(1500000)
 $1500000-1=211 \times 7109$
→ allows the comp. of $\log(7109)$
 $1500000+1=557 \times 2693$
 $\log(1500000)=\log(2^5 \times 3 \times 5^6)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]
 $\log(1500001)=\log(557 \times 2693)$
 $\log(1499999)=\log(211 \times 7109)$ [$\log(211)$ $\log(7109)$ known]
 $\log(211)=\log(211)$ [$\log(211)$ known]
 $\log(7109)=\log(7109)$ [$\log(7109)$ known]
decomposition(2320000)
 $2320000-1=3 \times 11 \times 229 \times 307$
→ allows the comp. of $\log(307)$
 $2320000+1=2320001$

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$\log(2320000)=\log(2^7 \times 5^4 \times 29)$ [$\log(2)$ $\log(5)$ $\log(29)$ known]
 $\log(2319999)=\log(3 \times 11 \times 229 \times 307)$ [$\log(3)$ $\log(11)$ $\log(229)$ $\log(307)$ known]
 $\log(307)=\log(307)$ [$\log(307)$ known]
decomposition(7200)
 $7200-1=23 \times 313$
→ allows the comp. of $\log(313)$
 $7200+1=19 \times 379$
→ allows the comp. of $\log(379)$

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$\log(7201)=\log(19 \times 379)$ [$\log(19)$ $\log(379)$ known]
 $\log(7200)=\log(2^5 \times 3^2 \times 5^2)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]
 $\log(7199)=\log(23 \times 313)$ [$\log(23)$ $\log(313)$ known]
 $\log(7201)=\log(19 \times 379)$ [$\log(19)$ $\log(379)$ known]
 $\log(19)=\log(19)$ [$\log(19)$ known]
 $\log(379)=\log(379)$ [$\log(379)$ known]
 $\log(7199)=\log(23 \times 313)$ [$\log(23)$ $\log(313)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(23)=log(23) [log(23) known]
log(313)=log(313) [log(313) known]
decomposition(72000)
  72000-1=71999
  72000+1=89 × 809
    → allows the comp. of log(809)
log(72001)=log(89 × 809) [log(89) log(809) known]
log(72000)=log(26 × 32 × 53) [log(2) log(3) log(5) known]
log(71999)=log(71999)
log(89)=log(89) [log(89) known]
log(809)=log(809) [log(809) known]
log(71999)=log(71999)
```

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```
decomposition(720000)
  720000-1=7 × 73 × 1409
    → allows the comp. of log(1409)
  720000+1=17 × 41 × 1033
    → allows the comp. of log(1033)
log(720001)=log(17 × 41 × 1033) [log(17) log(41) log(1033) known]
log(720000)=log(27 × 32 × 54) [log(2) log(3) log(5) known]
log(719999)=log(7 × 73 × 1409) [log(7) log(73) log(1409) known]
log(697)=log(17 × 41) [log(17) log(41) known]
log(1033)=log(1033) [log(1033) known]
log(719999)=log(7 × 73 × 1409) [log(7) log(73) log(1409) known]
log(511)=log(7 × 73) [log(7) log(73) known]
log(1409)=log(1409) [log(1409) known]
decomposition(9600)
  9600-1=29 × 331
    → allows the comp. of log(331)
  9600+1=9601
    → allows the comp. of log(9601)
```

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```
log(9601)=log(9601) [log(9601) known]
log(9600)=log(27 × 3 × 52) [log(2) log(3) log(5) known]
log(9599)=log(29 × 331) [log(29) log(331) known]
log(9601)=log(9601) [log(9601) known]
log(9599)=log(29 × 331) [log(29) log(331) known]
log(29)=log(29) [log(29) known]
log(331)=log(331) [log(331) known]
decomposition(96000)
  96000-1=17 × 5647
```


Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ allows the comp. of $\log(5647)$

$$96000+1=96001$$

$$\log(96001)=\log(96001)$$

$$\log(96000)=\log(2^8 \times 3 \times 5^3) \text{ [log(2) log(3) log(5) known]}$$

$$\log(95999)=\log(17 \times 5647) \text{ [log(17) log(5647) known]}$$

$$\log(96001)=\log(96001)$$

$$\log(95999)=\log(17 \times 5647) \text{ [log(17) log(5647) known]}$$

$$\log(17)=\log(17) \text{ [log(17) known]}$$

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$$\log(5647)=\log(5647) \text{ [log(5647) known]}$$

decomposition(960000)

$$960000-1=643 \times 1493$$

$$960000+1=7 \times 137143$$

$$\log(960001)=\log(7 \times 137143) \text{ [log(7) known]}$$

$$\log(960000)=\log(2^9 \times 3 \times 5^4) \text{ [log(2) log(3) log(5) known]}$$

$$\log(959999)=\log(643 \times 1493)$$

$$\log(7)=\log(7) \text{ [log(7) known]}$$

$$\log(137143)=\log(137143)$$

decomposition(9200)

$$9200-1=9199$$

→ allows the comp. of $\log(9199)$

$$9200+1=3 \times 3067$$

→ allows the comp. of $\log(3067)$

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$$\log(9201)=\log(3 \times 3067) \text{ [log(3) log(3067) known]}$$

$$\log(9200)=\log(2^4 \times 5^2 \times 23) \text{ [log(2) log(5) log(23) known]}$$

$$\log(9199)=\log(9199) \text{ [log(9199) known]}$$

$$\log(3)=\log(3) \text{ [log(3) known]}$$

$$\log(3067)=\log(3067) \text{ [log(3067) known]}$$

$$\log(9199)=\log(9199) \text{ [log(9199) known]}$$

decomposition(92000)

$$92000-1=197 \times 467$$

→ allows the comp. of $\log(467)$

$$92000+1=3 \times 7 \times 13 \times 337$$

→ allows the comp. of $\log(337)$

$$\log(92001)=\log(3 \times 7 \times 13 \times 337) \text{ [log(3) log(7) log(13) log(337) known]}$$

$$\log(92000)=\log(2^5 \times 5^3 \times 23) \text{ [log(2) log(5) log(23) known]}$$

$$\log(91999)=\log(197 \times 467) \text{ [log(197) log(467) known]}$$

$$\log(273)=\log(3 \times 7 \times 13) \text{ [log(3) log(7) log(13) known]}$$

$$\log(337)=\log(337) \text{ [log(337) known]}$$

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Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(91999)=log(197 × 467) [log(197) log(467) known]
log(197)=log(197) [log(197) known]
log(467)=log(467) [log(467) known]
decomposition(920000)
  920000-1=19 × 41 × 1181
    → allows the comp. of log(1181)
  920000+1=3 × 449 × 683
log(920001)=log(3 × 449 × 683) [log(3) known]
log(920000)=log(26 × 54 × 23) [log(2) log(5) log(23) known]
log(919999)=log(19 × 41 × 1181) [log(19) log(41) log(1181) known]
log(3)=log(3) [log(3) known]
log(306667)=log(449 × 683)
log(919999)=log(19 × 41 × 1181) [log(19) log(41) log(1181) known]
log(779)=log(19 × 41) [log(19) log(41) known]
log(1181)=log(1181) [log(1181) known]
decomposition(7500)
  7500-1=7499
    → allows the comp. of log(7499)
  7500+1=13 × 577
    → allows the comp. of log(577)
```

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```
log(7501)=log(13 × 577) [log(13) log(577) known]
log(7500)=log(22 × 3 × 54) [log(2) log(3) log(5) known]
log(7499)=log(7499) [log(7499) known]
log(13)=log(13) [log(13) known]
log(577)=log(577) [log(577) known]
log(207143)=log(359 × 577) [log(577) known]
log(359) (assumed to be known now)
log(7499)=log(7499) [log(7499) known]
decomposition(75000)
  75000-1=37 × 2027
    → allows the comp. of log(2027)
  75000+1=179 × 419
    → allows the comp. of log(419)
```

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```
log(75001)=log(179 × 419) [log(179) log(419) known]
log(75000)=log(23 × 3 × 55) [log(2) log(3) log(5) known]
log(74999)=log(37 × 2027) [log(37) log(2027) known]
log(179)=log(179) [log(179) known]
log(419)=log(419) [log(419) known]
log(37)=log(37) [log(37) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(2027)=log(2027) [log(2027) known]
decomposition(750000)
  750000-1=443 × 1693
  750000+1=7 × 307 × 349
    → allows the comp. of log(349)
log(750001)=log(7 × 307 × 349) [log(7) log(307) log(349) known]
log(750000)=log(24 × 3 × 56) [log(2) log(3) log(5) known]
log(749999)=log(443 × 1693)
log(7)=log(7) [log(7) known]
log(107143)=log(307 × 349) [log(307) log(349) known]
log(307)=log(307) [log(307) known]
log(349)=log(349) [log(349) known]
log(749999)=log(443 × 1693)
```

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```
decomposition(6000)
  6000-1=7 × 857
    → allows the comp. of log(857)
  6000+1=17 × 353
    → allows the comp. of log(353)
log(6001)=log(17 × 353) [log(17) log(353) known]
log(6000)=log(24 × 3 × 53) [log(2) log(3) log(5) known]
log(5999)=log(7 × 857) [log(7) log(857) known]
log(17)=log(17) [log(17) known]
log(353)=log(353) [log(353) known]
log(5999)=log(7 × 857) [log(7) log(857) known]
log(7)=log(7) [log(7) known]
log(857)=log(857) [log(857) known]
```

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```
decomposition(60000)
  60000-1=59999
  60000+1=29 × 2069
    → allows the comp. of log(2069)
log(60001)=log(29 × 2069) [log(29) log(2069) known]
log(60000)=log(25 × 3 × 54) [log(2) log(3) log(5) known]
log(59999)=log(59999)
log(29)=log(29) [log(29) known]
log(2069)=log(2069) [log(2069) known]
log(59999)=log(59999)
decomposition(600000)
  600000-1=599999
  600000+1=19 × 23 × 1373
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ allows the comp. of $\log(1373)$
 $\log(600001)=\log(19 \times 23 \times 1373)$ [$\log(19)$ $\log(23)$ $\log(1373)$ known]
 $\log(600000)=\log(2^6 \times 3 \times 5^5)$ [$\log(2)$ $\log(3)$ $\log(5)$ known]
 $\log(599999)=\log(599999)$
 $\log(437)=\log(19 \times 23)$ [$\log(19)$ $\log(23)$ known]

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$\log(1373)=\log(1373)$ [$\log(1373)$ known]
 $\log(599999)=\log(599999)$
 $\log(109000)=\log(2^3 \times 5^3 \times 109)$ [$\log(2)$ $\log(5)$ $\log(109)$ known]
 $\log(297)=\log(3^3 \times 11)$ [$\log(3)$ $\log(11)$ known]
 $\log(367)$ (assumed to be known now)
 $\log(109001)=\log(109001)$
decomposition(1090000)
 $1090000-1=3^2 \times 281 \times 431$
→ allows the comp. of $\log(431)$
 $1090000+1=11 \times 197 \times 503$
→ allows the comp. of $\log(503)$

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$\log(2167)=\log(11 \times 197)$ [$\log(11)$ $\log(197)$ known]
 $\log(503)=\log(503)$ [$\log(503)$ known]
 $\log(2529)=\log(3^2 \times 281)$ [$\log(3)$ $\log(281)$ known]
 $\log(431)=\log(431)$ [$\log(431)$ known]
decomposition(163000)
 $163000-1=3^3 \times 6037$
→ allows the comp. of $\log(6037)$
 $163000+1=19 \times 23 \times 373$
→ allows the comp. of $\log(373)$

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$\log(437)=\log(19 \times 23)$ [$\log(19)$ $\log(23)$ known]
 $\log(373)=\log(373)$ [$\log(373)$ known]
 $\log(27)=\log(3^3)$ [$\log(3)$ known]
 $\log(6037)=\log(6037)$ [$\log(6037)$ known]
decomposition(3500)
 $3500-1=3499$
→ allows the comp. of $\log(3499)$
 $3500+1=3^2 \times 389$
→ allows the comp. of $\log(389)$

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$\log(9)=\log(3^2)$ [$\log(3)$ known]
 $\log(389)=\log(389)$ [$\log(389)$ known]
 $\log(3499)=\log(3499)$ [$\log(3499)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

decomposition(35000)

$$35000-1=31 \times 1129$$

→ allows the comp. of $\log(1129)$

$$35000+1=3^2 \times 3889$$

→ allows the comp. of $\log(3889)$

$$\log(3889)=\log(3889) \text{ [log(3889) known]}$$

$$\log(31)=\log(31) \text{ [log(31) known]}$$

$$\log(1129)=\log(1129) \text{ [log(1129) known]}$$

decomposition(350000)

$$350000-1=13^2 \times 19 \times 109$$

$$350000+1=3^4 \times 29 \times 149$$

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decomposition(3500000)

$$3500000-1=3499999$$

$$3500000+1=3^2 \times 157 \times 2477$$

→ allows the comp. of $\log(2477)$

$$\log(388889)=\log(157 \times 2477) \text{ [log(157) log(2477) known]}$$

$$\log(157)=\log(157) \text{ [log(157) known]}$$

$$\log(2477)=\log(2477) \text{ [log(2477) known]}$$

decomposition(10600)

$$10600-1=3 \times 3533$$

→ allows the comp. of $\log(3533)$

$$10600+1=10601$$

page 92:

$$\log(10601)=\log(10601)$$

$$\log(3)=\log(3) \text{ [log(3) known]}$$

$$\log(3533)=\log(3533) \text{ [log(3533) known]}$$

decomposition(106000)

$$106000-1=3 \times 89 \times 397$$

→ allows the comp. of $\log(397)$

$$106000+1=7 \times 19 \times 797$$

page 93:

$$\log(133)=\log(7 \times 19) \text{ [log(7) log(19) known]}$$

$$\log(797)=\log(797) \text{ [log(797) known]}$$

$$\log(267)=\log(3 \times 89) \text{ [log(3) log(89) known]}$$

$$\log(397)=\log(397) \text{ [log(397) known]}$$

$$\log(899999)=\log(397 \times 2267) \text{ [log(397) known]}$$

$$\log(2267) \text{ (assumed to be known now)}$$

decomposition(1060000)

$$1060000-1=3 \times 353333$$

$$1060000+1=17 \times 23 \times 2711$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ allows the comp. of $\log(2711)$
 $\log(391)=\log(17 \times 23)$ [$\log(17)$ $\log(23)$ known]
 $\log(2711)=\log(2711)$ [$\log(2711)$ known]

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$\log(353333)=\log(353333)$
decomposition(4500)
 $4500-1=11 \times 409$
→ allows the comp. of $\log(409)$
 $4500+1=7 \times 643$
→ allows the comp. of $\log(643)$
 $\log(7)=\log(7)$ [$\log(7)$ known]
 $\log(643)=\log(643)$ [$\log(643)$ known]
 $\log(959999)=\log(643 \times 1493)$ [$\log(643)$ known]
 $\log(1493)$ (assumed to be known now)

page 95:

$\log(4499)=\log(11 \times 409)$ [$\log(11)$ $\log(409)$ known]
 $\log(11)=\log(11)$ [$\log(11)$ known]
 $\log(409)=\log(409)$ [$\log(409)$ known]
decomposition(45000)
 $45000-1=17 \times 2647$
→ allows the comp. of $\log(2647)$
 $45000+1=11 \times 4091$
→ allows the comp. of $\log(4091)$
 $\log(4091)=\log(4091)$ [$\log(4091)$ known]
 $\log(17)=\log(17)$ [$\log(17)$ known]
 $\log(2647)=\log(2647)$ [$\log(2647)$ known]
decomposition(450000)
 $450000-1=11^2 \times 3719$
→ allows the comp. of $\log(3719)$
 $450000+1=450001$

page 96:

$\log(450001)=\log(450001)$
 $\log(121)=\log(11^2)$ [$\log(11)$ known]
 $\log(3719)=\log(3719)$ [$\log(3719)$ known]
decomposition(4500000)
 $4500000-1=7 \times 113 \times 5689$
→ allows the comp. of $\log(5689)$
 $4500000+1=11 \times 313 \times 1307$
→ allows the comp. of $\log(1307)$
 $\log(3443)=\log(11 \times 313)$ [$\log(11)$ $\log(313)$ known]
 $\log(1307)=\log(1307)$ [$\log(1307)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\log(791)=\log(7 \times 113) \text{ [log(7) log(113) known]}$$

$$\log(5689)=\log(5689) \text{ [log(5689) known]}$$

page 97:

decomposition(1300)

$$1300-1=3 \times 433$$

→ allows the comp. of $\log(433)$

$$1300+1=1301$$

→ allows the comp. of $\log(1301)$

$$\log(1301)=\log(1301) \text{ [log(1301) known]}$$

$$\log(3)=\log(3) \text{ [log(3) known]}$$

$$\log(433)=\log(433) \text{ [log(433) known]}$$

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decomposition(13000)

$$13000-1=3 \times 7 \times 619$$

→ allows the comp. of $\log(619)$

$$13000+1=13001$$

$$\log(13001)=\log(13001)$$

$$\log(21)=\log(3 \times 7) \text{ [log(3) log(7) known]}$$

$$\log(619)=\log(619) \text{ [log(619) known]}$$

decomposition(130000)

$$130000-1=3 \times 17 \times 2549$$

→ allows the comp. of $\log(2549)$

$$130000+1=71 \times 1831$$

→ allows the comp. of $\log(1831)$

page 99:

$$\log(71)=\log(71) \text{ [log(71) known]}$$

$$\log(1831)=\log(1831) \text{ [log(1831) known]}$$

$$\log(51)=\log(3 \times 17) \text{ [log(3) log(17) known]}$$

$$\log(2549)=\log(2549) \text{ [log(2549) known]}$$

decomposition(1300000)

$$1300000-1=3 \times 19 \times 22807$$

$$1300000+1=67 \times 19403$$

$$\log(67)=\log(67) \text{ [log(67) known]}$$

$$\log(19403)=\log(19403)$$

$$\log(57)=\log(3 \times 19) \text{ [log(3) log(19) known]}$$

$$\log(22807)=\log(22807)$$

page 100:

decomposition(3100)

$$3100-1=3 \times 1033$$

$$3100+1=7 \times 443$$

→ allows the comp. of $\log(443)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(7)=\log(7)$ [$\log(7)$ known]
 $\log(443)=\log(443)$ [$\log(443)$ known]
 $\log(749999)=\log(443 \times 1693)$ [$\log(443)$ known]
 $\log(1693)$ (assumed to be known now)
 $\log(3099)=\log(3 \times 1033)$ [$\log(3)$ $\log(1033)$ known]
 $\log(3)=\log(3)$ [$\log(3)$ known]

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$\log(1033)=\log(1033)$ [$\log(1033)$ known]
decomposition(31000)
 $31000-1=3 \times 10333$
 $31000+1=29 \times 1069$
 $\log(29)=\log(29)$ [$\log(29)$ known]
 $\log(1069)=\log(1069)$ [$\log(1069)$ known]
 $\log(3)=\log(3)$ [$\log(3)$ known]
 $\log(10333)=\log(10333)$
decomposition(310000)
 $310000-1=3 \times 103333$
 $310000+1=41 \times 7561$
→ allows the comp. of $\log(7561)$

page 102:

$\log(41)=\log(41)$ [$\log(41)$ known]
 $\log(7561)=\log(7561)$ [$\log(7561)$ known]
 $\log(3)=\log(3)$ [$\log(3)$ known]
 $\log(103333)=\log(103333)$
decomposition(3100000)
 $3100000-1=3 \times 7 \times 43 \times 3433$
→ allows the comp. of $\log(3433)$
 $3100000+1=17 \times 182353$
 $\log(17)=\log(17)$ [$\log(17)$ known]
 $\log(182353)=\log(182353)$
 $\log(903)=\log(3 \times 7 \times 43)$ [$\log(3)$ $\log(7)$ $\log(43)$ known]
 $\log(3433)=\log(3433)$ [$\log(3433)$ known]

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decomposition(22000)
 $22000-1=3 \times 7333$
→ allows the comp. of $\log(7333)$
 $22000+1=7^2 \times 449$
→ allows the comp. of $\log(449)$
 $\log(49)=\log(7^2)$ [$\log(7)$ known]
 $\log(449)=\log(449)$ [$\log(449)$ known]
 $\log(306667)=\log(449 \times 683)$ [$\log(449)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(683)$ (assumed to be known now)
 $\log(21999)=\log(3 \times 7333)$ [$\log(3)$ $\log(7333)$ known]
 $\log(3)=\log(3)$ [$\log(3)$ known]
 $\log(7333)=\log(7333)$ [$\log(7333)$ known]

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$\log(220000)=\log(2^5 \times 5^4 \times 11)$ [$\log(2)$ $\log(5)$ $\log(11)$ known]
 $\log(19)=\log(19)$ [$\log(19)$ known]
 $\log(11579)=\log(11579)$
 $\log(39)=\log(3 \times 13)$ [$\log(3)$ $\log(13)$ known]
 $\log(5641)$ (assumed to be known now)
decomposition(24400)
 $24400-1=3^2 \times 2711$
 $24400+1=13 \times 1877$
→ allows the comp. of $\log(1877)$

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$\log(13)=\log(13)$ [$\log(13)$ known]
 $\log(1877)=\log(1877)$ [$\log(1877)$ known]
 $\log(9)=\log(3^2)$ [$\log(3)$ known]
 $\log(2711)=\log(2711)$ [$\log(2711)$ known]
decomposition(244000)
 $244000-1=3^3 \times 7 \times 1291$
→ allows the comp. of $\log(1291)$
 $244000+1=17 \times 31 \times 463$
→ allows the comp. of $\log(463)$

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$\log(527)=\log(17 \times 31)$ [$\log(17)$ $\log(31)$ known]
 $\log(463)=\log(463)$ [$\log(463)$ known]
 $\log(27)=\log(3^3)$ [$\log(3)$ known]
 $\log(9037)=\log(7 \times 1291)$ [$\log(7)$ $\log(1291)$ known]
 $\log(7)=\log(7)$ [$\log(7)$ known]
 $\log(1291)=\log(1291)$ [$\log(1291)$ known]
decomposition(2440000)
 $2440000-1=3^2 \times 19^2 \times 751$
→ allows the comp. of $\log(751)$
 $2440000+1=23 \times 106087$
 $\log(23)=\log(23)$ [$\log(23)$ known]
 $\log(106087)=\log(106087)$
 $\log(3249)=\log(3^2 \times 19^2)$ [$\log(3)$ $\log(19)$ known]

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$\log(751)=\log(751)$ [$\log(751)$ known]
decomposition(82810000)

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$82810000-1=3^3 \times 19 \times 337 \times 479$$

→ allows the comp. of $\log(479)$

$$82810000+1=61 \times 101 \times 13441$$

$$\log(9099)=\log(3^3 \times 337) \text{ [}\log(3) \log(337) \text{ known]}$$

$$\log(9101)=\log(19 \times 479) \text{ [}\log(19) \log(479) \text{ known]}$$

$$\log(19)=\log(19) \text{ [}\log(19) \text{ known]}$$

$$\log(479)=\log(479) \text{ [}\log(479) \text{ known]}$$

decomposition(206000)

$$206000-1=113 \times 1823$$

→ allows the comp. of $\log(1823)$

$$206000+1=3^2 \times 47 \times 487$$

→ allows the comp. of $\log(487)$

page 108:

$$\log(483)=\log(3 \times 7 \times 23) \text{ [}\log(3) \log(7) \log(23) \text{ known]}$$

$$\log(487)=\log(487) \text{ [}\log(487) \text{ known]}$$

$$\log(113)=\log(113) \text{ [}\log(113) \text{ known]}$$

$$\log(1823)=\log(1823) \text{ [}\log(1823) \text{ known]}$$

decomposition(2060000)

$$2060000-1=19 \times 108421$$

$$2060000+1=3^2 \times 43 \times 5323$$

→ allows the comp. of $\log(5323)$

$$\log(387)=\log(3^2 \times 43) \text{ [}\log(3) \log(43) \text{ known]}$$

decomposition(5323)

$$5323-1=2 \times 3 \times 887$$

$$5323+1=2^2 \times 11^3$$

page 109:

$$\log(19)=\log(19) \text{ [}\log(19) \text{ known]}$$

$$\log(108421)=\log(108421)$$

decomposition(3300)

$$3300-1=3299$$

→ allows the comp. of $\log(3299)$

$$3300+1=3301$$

→ allows the comp. of $\log(3301)$

$$\log(3301)=\log(3301) \text{ [}\log(3301) \text{ known]}$$

$$\log(3299)=\log(3299) \text{ [}\log(3299) \text{ known]}$$

decomposition(33000)

$$33000-1=32999$$

$$33000+1=61 \times 541$$

→ allows the comp. of $\log(541)$

page 110:

$$\log(61)=\log(61) \text{ [}\log(61) \text{ known]}$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(541)=\log(541)$ [$\log(541)$ known]
 $\log(32999)=\log(32999)$
 $\log(9900)=\log(2^2 \times 3^2 \times 5^2 \times 11)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(11)$ known]
 $\log(9901)$ (assumed to be known now)

page 111:

$\log(19)=\log(19)$ [$\log(19)$ known]
 $\log(521)$ (assumed to be known now)
 $\log(99000)=\log(2^3 \times 3^2 \times 5^3 \times 11)$ [$\log(2)$ $\log(3)$ $\log(5)$ $\log(11)$ known]
 $\log(7)=\log(7)$ [$\log(7)$ known]
 $\log(17143)=\log(7 \times 31 \times 79)$ [$\log(7)$ $\log(31)$ $\log(79)$ known]
 $\log(98999)=\log(98999)$
decomposition(19800)
 $19800-1=13 \times 1523$
→ allows the comp. of $\log(1523)$
 $19800+1=19801$

page 112:

$\log(19801)=\log(19801)$
 $\log(13)=\log(13)$ [$\log(13)$ known]
 $\log(1523)=\log(1523)$ [$\log(1523)$ known]
decomposition(198000)
 $198000-1=17 \times 19 \times 613$
→ allows the comp. of $\log(613)$
 $198000+1=389 \times 509$
→ allows the comp. of $\log(509)$
 $\log(389)=\log(389)$ [$\log(389)$ known]
 $\log(509)=\log(509)$ [$\log(509)$ known]
 $\log(323)=\log(17 \times 19)$ [$\log(17)$ $\log(19)$ known]
 $\log(613)=\log(613)$ [$\log(613)$ known]

page 113:

decomposition(1980000)
 $1980000-1=7 \times 61 \times 4637$
→ allows the comp. of $\log(4637)$
 $1980000+1=23 \times 31 \times 2777$
→ allows the comp. of $\log(2777)$
 $\log(713)=\log(23 \times 31)$ [$\log(23)$ $\log(31)$ known]
 $\log(2777)=\log(2777)$ [$\log(2777)$ known]
 $\log(427)=\log(7 \times 61)$ [$\log(7)$ $\log(61)$ known]
 $\log(4637)=\log(4637)$ [$\log(4637)$ known]
decomposition(6800)
 $6800-1=13 \times 523$
→ allows the comp. of $\log(523)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$6800+1=3 \times 2267$$

page 114:

$$\log(3)=\log(3) \text{ [log(3) known]}$$

$$\log(2267)=\log(2267) \text{ [log(2267) known]}$$

$$\log(13)=\log(13) \text{ [log(13) known]}$$

$$\log(523)=\log(523) \text{ [log(523) known]}$$

decomposition(68000)

$$68000-1=53 \times 1283$$

→ allows the comp. of log(1283)

$$68000+1=3 \times 19 \times 1193$$

→ allows the comp. of log(1193)

page 115:

$$\log(57)=\log(3 \times 19) \text{ [log(3) log(19) known]}$$

$$\log(1193)=\log(1193) \text{ [log(1193) known]}$$

$$\log(53)=\log(53) \text{ [log(53) known]}$$

$$\log(1283)=\log(1283) \text{ [log(1283) known]}$$

decomposition(386000)

$$386000-1=53 \times 7283$$

→ allows the comp. of log(7283)

$$386000+1=3^2 \times 7 \times 11 \times 557$$

→ allows the comp. of log(557)

$$\log(53)=\log(53) \text{ [log(53) known]}$$

$$\log(7283)=\log(7283) \text{ [log(7283) known]}$$

page 116:

$$\log(693)=\log(3^2 \times 7 \times 11) \text{ [log(3) log(7) log(11) known]}$$

$$\log(557)=\log(557) \text{ [log(557) known]}$$

$$\log(1500001)=\log(557 \times 2693) \text{ [log(557) known]}$$

$$\log(2693) \text{ (assumed to be known now)}$$

decomposition(2100)

$$2100-1=2099$$

→ allows the comp. of log(2099)

$$2100+1=11 \times 191$$

page 117:

$$\log(2099)=\log(2099) \text{ [log(2099) known]}$$

decomposition(21000)

$$21000-1=11 \times 23 \times 83$$

$$21000+1=21001$$

$$\log(11)=\log(11) \text{ [log(11) known]}$$

$$\log(1909)=\log(23 \times 83) \text{ [log(23) log(83) known]}$$

$$\log(21001)=\log(21001)$$

decomposition(210000)

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$210000-1=373 \times 563$$

→ allows the comp. of $\log(563)$

$$210000+1=11 \times 17 \times 1123$$

→ allows the comp. of $\log(1123)$

page 118:

$$\log(373)=\log(373) \text{ [log(373) known]}$$

$$\log(563)=\log(563) \text{ [log(563) known]}$$

$$\log(187)=\log(11 \times 17) \text{ [log(11) log(17) known]}$$

$$\log(1123)=\log(1123) \text{ [log(1123) known]}$$

decomposition(2100000)

$$2100000-1=11 \times 190909$$

$$2100000+1=2100001$$

$$\log(11)=\log(11) \text{ [log(11) known]}$$

$$\log(190909)=\log(190909)$$

$$\log(2100001)=\log(2100001)$$

decomposition(26800)

$$26800-1=3 \times 8933$$

→ allows the comp. of $\log(8933)$

$$26800+1=26801$$

page 119:

$$\log(3)=\log(3) \text{ [log(3) known]}$$

$$\log(8933)=\log(8933) \text{ [log(8933) known]}$$

$$\log(26801)=\log(26801)$$

decomposition(268000)

$$268000-1=3 \times 157 \times 569$$

→ allows the comp. of $\log(569)$

$$268000+1=283 \times 947$$

→ allows the comp. of $\log(947)$

page 120:

$$\log(471)=\log(3 \times 157) \text{ [log(3) log(157) known]}$$

$$\log(569)=\log(569) \text{ [log(569) known]}$$

$$\log(283)=\log(283) \text{ [log(283) known]}$$

$$\log(947)=\log(947) \text{ [log(947) known]}$$

decomposition(2680000)

$$2680000-1=3 \times 7 \times 17 \times 7507$$

→ allows the comp. of $\log(7507)$

$$2680000+1=743 \times 3607$$

$$\log(357)=\log(3 \times 7 \times 17) \text{ [log(3) log(7) log(17) known]}$$

$$\log(7507)=\log(7507) \text{ [log(7507) known]}$$

page 121:

decomposition(17700)

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$17700-1=11 \times 1609$$

→ allows the comp. of $\log(1609)$

$$17700+1=31 \times 571$$

→ allows the comp. of $\log(571)$

$$\log(11)=\log(11) \text{ [log(11) known]}$$

$$\log(1609)=\log(1609) \text{ [log(1609) known]}$$

$$\log(17701)=\log(31 \times 571) \text{ [log(31) log(571) known]}$$

$$\log(31)=\log(31) \text{ [log(31) known]}$$

$$\log(571)=\log(571) \text{ [log(571) known]}$$

decomposition(177000)

$$177000-1=263 \times 673$$

→ allows the comp. of $\log(673)$

$$177000+1=11 \times 16091$$

page 122:

$$\log(263)=\log(263) \text{ [log(263) known]}$$

$$\log(673)=\log(673) \text{ [log(673) known]}$$

$$\log(11)=\log(11) \text{ [log(11) known]}$$

$$\log(16091)=\log(16091)$$

decomposition(1770000)

$$1770000-1=7 \times 11 \times 127 \times 181$$

$$1770000+1=1770001$$

$$\log(77)=\log(7 \times 11) \text{ [log(7) log(11) known]}$$

page 123:

$$\log(22987)=\log(127 \times 181) \text{ [log(127) log(181) known]}$$

$$\log(1770001)=\log(1770001)$$

decomposition(280000)

$$280000-1=3^2 \times 53 \times 587$$

→ allows the comp. of $\log(587)$

$$280000+1=280001$$

$$\log(477)=\log(3^2 \times 53) \text{ [log(3) log(53) known]}$$

$$\log(587)=\log(587) \text{ [log(587) known]}$$

$$\log(280001)=\log(280001)$$

decomposition(27100)

$$27100-1=3^2 \times 3011$$

→ allows the comp. of $\log(3011)$

$$27100+1=41 \times 661$$

→ allows the comp. of $\log(661)$

page 124:

$$\log(9)=\log(3^2) \text{ [log(3) known]}$$

$$\log(41)=\log(41) \text{ [log(41) known]}$$

$$\log(3011)=\log(3011) \text{ [log(3011) known]}$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(661)=\log(661)$ [$\log(661)$ known]
decomposition(271000)
 $271000-1=3^3 \times 10037$
 $271000+1=457 \times 593$
→ allows the comp. of $\log(593)$

page 125:

$\log(27)=\log(3^3)$ [$\log(3)$ known]
 $\log(457)=\log(457)$ [$\log(457)$ known]
 $\log(10037)=\log(10037)$
 $\log(593)=\log(593)$ [$\log(593)$ known]
decomposition(2710000)
 $2710000-1=3^2 \times 71 \times 4241$
→ allows the comp. of $\log(4241)$
 $2710000+1=7 \times 467 \times 829$
→ allows the comp. of $\log(829)$
 $\log(639)=\log(3^2 \times 71)$ [$\log(3)$ $\log(71)$ known]
 $\log(3269)=\log(7 \times 467)$ [$\log(7)$ $\log(467)$ known]
 $\log(4241)=\log(4241)$ [$\log(4241)$ known]
 $\log(829)=\log(829)$ [$\log(829)$ known]
decomposition(241000)
 $241000-1=3 \times 11 \times 67 \times 109$
 $241000+1=401 \times 601$
→ allows the comp. of $\log(601)$

page 126:

$\log(2211)=\log(3 \times 11 \times 67)$ [$\log(3)$ $\log(11)$ $\log(67)$ known]
 $\log(401)=\log(401)$ [$\log(401)$ known]
 $\log(109)=\log(109)$ [$\log(109)$ known]
 $\log(601)=\log(601)$ [$\log(601)$ known]
 $\log(359999)=\log(599 \times 601)$ [$\log(601)$ known]
 $\log(599)$ (assumed to be known now)
decomposition(15600)
 $15600-1=19 \times 821$
→ allows the comp. of $\log(821)$
 $15600+1=15601$

page 127:

$\log(19)=\log(19)$ [$\log(19)$ known]
 $\log(821)=\log(821)$ [$\log(821)$ known]
 $\log(15601)=\log(15601)$
decomposition(156000)
 $156000-1=257 \times 607$
→ allows the comp. of $\log(607)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$156000+1=73 \times 2137$$

→ allows the comp. of $\log(2137)$

page 128:

$$\log(257)=\log(257) \text{ [log(257) known]}$$

$$\log(73)=\log(73) \text{ [log(73) known]}$$

$$\log(607)=\log(607) \text{ [log(607) known]}$$

$$\log(2137)=\log(2137) \text{ [log(2137) known]}$$

decomposition(1560000)

$$1560000-1=7 \times 222857$$

$$1560000+1=1249^2$$

→ allows the comp. of $\log(1249)$

$$\log(222857)=\log(222857)$$

$$\log(1249)=\log(1249) \text{ [log(1249) known]}$$

decomposition(249000000)

$$249000000-1=239 \times 1041841$$

$$249000000+1=23 \times 59 \times 281 \times 653$$

→ allows the comp. of $\log(653)$

page 129:

$$\log(1357)=\log(23 \times 59) \text{ [log(23) log(59) known]}$$

$$\log(281)=\log(281) \text{ [log(281) known]}$$

$$\log(653)=\log(653) \text{ [log(653) known]}$$

decomposition(60800000)

$$60800000-1=13 \times 47 \times 151 \times 659$$

→ allows the comp. of $\log(659)$

$$60800000+1=3 \times 1669 \times 12143$$

$$\log(7097)=\log(47 \times 151) \text{ [log(47) log(151) known]}$$

$$\log(8567)=\log(13 \times 659) \text{ [log(13) log(659) known]}$$

$$\log(13)=\log(13) \text{ [log(13) known]}$$

$$\log(659)=\log(659) \text{ [log(659) known]}$$

page 130:

decomposition(410000000)

$$410000000-1=17 \times 29 \times 831643$$

$$410000000+1=3 \times 23 \times 67 \times 131 \times 677$$

→ allows the comp. of $\log(677)$

$$\log(69)=\log(3 \times 23) \text{ [log(3) log(23) known]}$$

$$\log(8777)=\log(67 \times 131) \text{ [log(67) log(131) known]}$$

$$\log(677)=\log(677) \text{ [log(677) known]}$$

decomposition(191000000)

$$191000000-1=127 \times 1503937$$

$$191000000+1=3 \times 199 \times 463 \times 691$$

→ allows the comp. of $\log(691)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(1389)=\log(3 \times 463)$ [$\log(3)$ $\log(463)$ known]

$\log(199)=\log(199)$ [$\log(199)$ known]

$\log(691)=\log(691)$ [$\log(691)$ known]

decomposition(1760000000)

$1760000000-1=61 \times 79 \times 521 \times 701$

→ allows the comp. of $\log(701)$

$1760000000+1=3 \times 19 \times 109 \times 283277$

page 131:

$\log(521)=\log(521)$ [$\log(521)$ known]

$\log(4819)=\log(61 \times 79)$ [$\log(61)$ $\log(79)$ known]

$\log(701)=\log(701)$ [$\log(701)$ known]

decomposition(18300000)

$18300000-1=53 \times 487 \times 709$

→ allows the comp. of $\log(709)$

$18300000+1=18300001$

$\log(709)=\log(709)$ [$\log(709)$ known]

decomposition(632000)

$632000-1=619 \times 1021$

→ allows the comp. of $\log(1021)$

$632000+1=3 \times 293 \times 719$

→ allows the comp. of $\log(719)$

page 132:

$\log(619)=\log(619)$ [$\log(619)$ known]

$\log(879)=\log(3 \times 293)$ [$\log(3)$ $\log(293)$ known]

$\log(1021)=\log(1021)$ [$\log(1021)$ known]

$\log(719)=\log(719)$ [$\log(719)$ known]

decomposition(47500000)

$47500000-1=3 \times 29 \times 727 \times 751$

→ allows the comp. of $\log(727)$

$47500000+1=47500001$

$\log(87)=\log(3 \times 29)$ [$\log(3)$ $\log(29)$ known]

$\log(751)=\log(751)$ [$\log(751)$ known]

$\log(727)=\log(727)$ [$\log(727)$ known]

decomposition(19500000)

$19500000-1=37 \times 719 \times 733$

→ allows the comp. of $\log(733)$

$19500000+1=107 \times 182243$

page 133:

$\log(733)=\log(733)$ [$\log(733)$ known]

decomposition(252000)

$252000-1=11 \times 31 \times 739$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ allows the comp. of $\log(739)$
252000+1=252001
 $\log(341)=\log(11 \times 31)$ [$\log(11)$ $\log(31)$ known]
 $\log(739)=\log(739)$ [$\log(739)$ known]
 $\log(252001)=\log(252001)$
decomposition(451000)
451000-1=3² × 50111
451000+1=607 × 743
→ allows the comp. of $\log(743)$

page 134:

$\log(9)=\log(3^2)$ [$\log(3)$ known]
 $\log(607)=\log(607)$ [$\log(607)$ known]
 $\log(50111)=\log(50111)$
 $\log(743)=\log(743)$ [$\log(743)$ known]
 $\log(2680001)=\log(743 \times 3607)$ [$\log(743)$ known]
 $\log(3607)$ (assumed to be known now)
decomposition(2520000)
2520000-1=47 × 53617
2520000+1=11 × 193 × 1187
→ allows the comp. of $\log(1187)$

page 135:

$\log(47)=\log(47)$ [$\log(47)$ known]
 $\log(2123)=\log(11 \times 193)$ [$\log(11)$ $\log(193)$ known]
 $\log(53617)=\log(53617)$
 $\log(1187)=\log(1187)$ [$\log(1187)$ known]
decomposition(252000000)
252000000-1=251999999
252000000+1=11 × 53 × 571 × 757
→ allows the comp. of $\log(757)$
 $\log(583)=\log(11 \times 53)$ [$\log(11)$ $\log(53)$ known]
 $\log(571)=\log(571)$ [$\log(571)$ known]
 $\log(757)=\log(757)$ [$\log(757)$ known]
decomposition(29800000)
29800000-1=3² × 19 × 229 × 761
→ allows the comp. of $\log(761)$
29800000+1=7 × 11² × 151 × 233
 $\log(2563)=\log(11 \times 233)$ [$\log(11)$ $\log(233)$ known]
 $\log(2519)=\log(11 \times 229)$ [$\log(11)$ $\log(229)$ known]
 $\log(2869)=\log(19 \times 151)$ [$\log(19)$ $\log(151)$ known]
 $\log(63)=\log(3^2 \times 7)$ [$\log(3)$ $\log(7)$ known]
 $\log(761)=\log(761)$ [$\log(761)$ known]

page 136:

```
decomposition(1720000000)
  1720000000-1=32 × 257 × 769 × 967
    → allows the comp. of log(769)
  1720000000+1=31 × 131 × 423541
  log(967)=log(967) [log(967) known]
  log(2313)=log(32 × 257) [log(3) log(257) known]
  log(769)=log(769) [log(769) known]
decomposition(1420000)
  1420000-1=3 × 7 × 67619
  1420000+1=11 × 167 × 773
    → allows the comp. of log(773)
  log(21)=log(3 × 7) [log(3) log(7) known]
  log(1837)=log(11 × 167) [log(11) log(167) known]
  log(67619)=log(67619)
  log(773)=log(773) [log(773) known]
decomposition(304000000)
  304000000-1=3 × 331 × 389 × 787
    → allows the comp. of log(787)
  304000000+1=17 × 1012 × 1753
    → allows the comp. of log(1753)
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page 137:

```
log(389)=log(389) [log(389) known]
log(993)=log(3 × 331) [log(3) log(331) known]
log(787)=log(787) [log(787) known]
decomposition(39500000)
  39500000-1=7 × 11 × 53 × 9679
    → allows the comp. of log(9679)
  39500000+1=33 × 29 × 61 × 827
    → allows the comp. of log(827)
  log(1769)=log(29 × 61) [log(29) log(61) known]
  log(27)=log(33) [log(3) known]
  log(827)=log(827) [log(827) known]
decomposition(48500000)
  48500000-1=131 × 431 × 859
    → allows the comp. of log(859)
  48500000+1=32 × 11 × 43 × 11393
  log(131)=log(131) [log(131) known]
  log(431)=log(431) [log(431) known]
  log(859)=log(859) [log(859) known]
```

page 138:

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(3247)=\log(17 \times 191)$ [$\log(17)$ $\log(191)$ known]
 $\log(21)=\log(3 \times 7)$ [$\log(3)$ $\log(7)$ known]
 $\log(877)$ (assumed to be known now)
decomposition(33900000)
 $33900000-1=7 \times 23 \times 239 \times 881$
→ allows the comp. of $\log(881)$
 $33900000+1=1123 \times 30187$
 $\log(161)=\log(7 \times 23)$ [$\log(7)$ $\log(23)$ known]
 $\log(239)=\log(239)$ [$\log(239)$ known]
 $\log(881)=\log(881)$ [$\log(881)$ known]
decomposition(69800000)
 $69800000-1=41 \times 907 \times 1877$
→ allows the comp. of $\log(907)$
 $69800000+1=3 \times 23266667$

page 139:

$\log(1877)=\log(1877)$ [$\log(1877)$ known]
 $\log(41)=\log(41)$ [$\log(41)$ known]
 $\log(907)=\log(907)$ [$\log(907)$ known]
decomposition(56400000)
 $56400000-1=61 \times 92459$
 $56400000+1=41 \times 151 \times 911$
→ allows the comp. of $\log(911)$
 $\log(6191)=\log(41 \times 151)$ [$\log(41)$ $\log(151)$ known]
 $\log(911)=\log(911)$ [$\log(911)$ known]
decomposition(280000000)
 $280000000-1=3^2 \times 23 \times 1352657$
 $280000000+1=547 \times 557 \times 919$
→ allows the comp. of $\log(919)$
 $\log(547)=\log(547)$ [$\log(547)$ known]
 $\log(557)=\log(557)$ [$\log(557)$ known]
 $\log(919)=\log(919)$ [$\log(919)$ known]
decomposition(66600000)
 $66600000-1=41 \times 162439$
 $66600000+1=67 \times 107 \times 929$
→ allows the comp. of $\log(929)$

page 140:

$\log(67)=\log(67)$ [$\log(67)$ known]
 $\log(107)=\log(107)$ [$\log(107)$ known]
 $\log(929)=\log(929)$ [$\log(929)$ known]
decomposition(81400000)
 $81400000-1=3 \times 59 \times 271 \times 1697$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ allows the comp. of $\log(1697)$
 $81400000+1=109 \times 797 \times 937$
→ allows the comp. of $\log(937)$
 $\log(109)=\log(109)$ [$\log(109)$ known]
 $\log(797)=\log(797)$ [$\log(797)$ known]
 $\log(937)=\log(937)$ [$\log(937)$ known]
decomposition(2690000000)
 $2690000000-1=2689999999$
 $2690000000+1=3^2 \times 13 \times 53 \times 461 \times 941$
 $\log(4149)=\log(3^2 \times 461)$ [$\log(3)$ $\log(461)$ known]
 $\log(689)=\log(13 \times 53)$ [$\log(13)$ $\log(53)$ known]
 $\log(941)$ (assumed to be known now)
decomposition(4400000)
 $4400000-1=47 \times 179 \times 523$
 $4400000+1=3^5 \times 19 \times 953$
→ allows the comp. of $\log(953)$

page 141:

$\log(4617)=\log(3^5 \times 19)$ [$\log(3)$ $\log(19)$ known]
 $\log(953)=\log(953)$ [$\log(953)$ known]
decomposition(605000000)
 $605000000-1=31 \times 101 \times 199 \times 971$
→ allows the comp. of $\log(971)$
 $605000000+1=3 \times 29 \times 6954023$
 $\log(6169)=\log(31 \times 199)$ [$\log(31)$ $\log(199)$ known]
 $\log(101)=\log(101)$ [$\log(101)$ known]
 $\log(971)=\log(971)$ [$\log(971)$ known]
decomposition(386000000)
 $386000000-1=7^2 \times 11 \times 733 \times 977$
→ allows the comp. of $\log(977)$
 $386000000+1=3^2 \times 42888889$
 $\log(733)=\log(733)$ [$\log(733)$ known]
 $\log(539)=\log(7^2 \times 11)$ [$\log(7)$ $\log(11)$ known]
 $\log(977)=\log(977)$ [$\log(977)$ known]

page 142:

decomposition(89800000)
 $89800000-1=3 \times 37 \times 823 \times 983$
→ allows the comp. of $\log(983)$
 $89800000+1=17 \times 73 \times 269^2$
 $\log(111)=\log(3 \times 37)$ [$\log(3)$ $\log(37)$ known]
 $\log(823)=\log(823)$ [$\log(823)$ known]
 $\log(983)=\log(983)$ [$\log(983)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

decomposition(554000000)

$$554000000-1=7 \times 163 \times 487 \times 997$$

→ allows the comp. of $\log(997)$

$$554000000+1=3 \times 37 \times 439 \times 11369$$

$$\log(1141)=\log(7 \times 163) \text{ [}\log(7) \log(163) \text{ known]}$$

$$\log(487)=\log(487) \text{ [}\log(487) \text{ known]}$$

$$\log(997)=\log(997) \text{ [}\log(997) \text{ known]}$$

decomposition(6490000000)

$$6490000000-1=3^2 \times 7 \times 23^2 \times 193 \times 1009$$

$$6490000000+1=6490000001$$

$$\log(1737)=\log(3^2 \times 193) \text{ [}\log(3) \log(193) \text{ known]}$$

page 143:

$$\log(3736327)=\log(7 \times 23^2 \times 1009) \text{ [}\log(7) \log(23) \text{ known]}$$

$$\log(1009) \text{ (assumed to be known now)}$$

decomposition(2020000000)

$$2020000000-1=3 \times 5881 \times 114493$$

$$2020000000+1=23 \times 181 \times 479 \times 1013$$

→ allows the comp. of $\log(1013)$

$$\log(4163)=\log(23 \times 181) \text{ [}\log(23) \log(181) \text{ known]}$$

$$\log(479)=\log(479) \text{ [}\log(479) \text{ known]}$$

$$\log(1013)=\log(1013) \text{ [}\log(1013) \text{ known]}$$

decomposition(589000000)

$$589000000-1=3 \times 137 \times 139 \times 1031$$

→ allows the comp. of $\log(1031)$

$$589000000+1=589000001$$

$$\log(411)=\log(3 \times 137) \text{ [}\log(3) \log(137) \text{ known]}$$

$$\log(139)=\log(139) \text{ [}\log(139) \text{ known]}$$

$$\log(1031)=\log(1031) \text{ [}\log(1031) \text{ known]}$$

decomposition(69000000)

$$69000000-1=29 \times 229 \times 1039$$

→ allows the comp. of $\log(1039)$

$$69000000+1=69000001$$

page 144:

$$\log(6641)=\log(29 \times 229) \text{ [}\log(29) \log(229) \text{ known]}$$

$$\log(1039)=\log(1039) \text{ [}\log(1039) \text{ known]}$$

decomposition(502000000)

$$502000000-1=3 \times 269 \times 593 \times 1049$$

→ allows the comp. of $\log(1049)$

$$502000000+1=23 \times 21826087$$

$$\log(807)=\log(3 \times 269) \text{ [}\log(3) \log(269) \text{ known]}$$

$$\log(593)=\log(593) \text{ [}\log(593) \text{ known]}$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(1049)=\log(1049)$ [log(1049) known]
decomposition(77300000)
 $77300000-1=7^2 \times 19 \times 79 \times 1051$
→ allows the comp. of log(1051)
 $77300000+1=3^5 \times 318107$
 $\log(931)=\log(7^2 \times 19)$ [log(7) log(19) known]
 $\log(79)=\log(79)$ [log(79) known]
 $\log(1051)=\log(1051)$ [log(1051) known]

page 145:

decomposition(35500000)
 $35500000-1=3 \times 19 \times 587 \times 1061$
→ allows the comp. of log(1061)
 $35500000+1=3371 \times 10531$
 $\log(57)=\log(3 \times 19)$ [log(3) log(19) known]
 $\log(587)=\log(587)$ [log(587) known]
 $\log(1061)=\log(1061)$ [log(1061) known]
decomposition(2280000000)
 $2280000000-1=17 \times 281 \times 449 \times 1063$
 $2280000000+1=157 \times 14522293$
 $\log(4777)=\log(17 \times 281)$ [log(17) log(281) known]
 $\log(449)=\log(449)$ [log(449) known]
 $\log(1063)$ (assumed to be known now)
decomposition(4220000000)
 $4220000000-1=251 \times 16812749$
 $4220000000+1=3^2 \times 7^4 \times 179 \times 1091$
 $\log(2401)=\log(7^4)$ [log(7) known]
 $\log(1611)=\log(3^2 \times 179)$ [log(3) log(179) known]
 $\log(1091)$ (assumed to be known now)

page 146:

decomposition(1070000000)
 $1070000000-1=31 \times 34516129$
 $1070000000+1=3^2 \times 7 \times 41 \times 379 \times 1093$
→ allows the comp. of log(1093)
 $\log(2653)=\log(7 \times 379)$ [log(7) log(379) known]
 $\log(369)=\log(3^2 \times 41)$ [log(3) log(41) known]
 $\log(1093)=\log(1093)$ [log(1093) known]
decomposition(740000000)
 $740000000-1=23 \times 139 \times 211 \times 1097$
→ allows the comp. of log(1097)
 $740000000+1=3 \times 13 \times 3779 \times 5021$
 $\log(3197)=\log(23 \times 139)$ [log(23) log(139) known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(211)=\log(211)$ [log(211) known]
 $\log(1097)=\log(1097)$ [log(1097) known]

page 147:

decomposition(1360000)
 $1360000-1=3^2 \times 137 \times 1103$
→ allows the comp. of $\log(1103)$
 $1360000+1=19 \times 31 \times 2309$
→ allows the comp. of $\log(2309)$
 $\log(1233)=\log(3^2 \times 137)$ [log(3) log(137) known]
 $\log(1103)=\log(1103)$ [log(1103) known]

decomposition(131000000)
 $131000000-1=13 \times 2393 \times 4211$
 $131000000+1=3 \times 11 \times 59 \times 61 \times 1103$
 $\log(183)=\log(3 \times 61)$ [log(3) log(61) known]
 $\log(649)=\log(11 \times 59)$ [log(11) log(59) known]
 $\log(1103)=\log(1103)$ [log(1103) known]

decomposition(82300000)
 $82300000-1=3 \times 29 \times 853 \times 1109$
→ allows the comp. of $\log(1109)$
 $82300000+1=7 \times 19 \times 149 \times 4153$
→ allows the comp. of $\log(4153)$

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$\log(87)=\log(3 \times 29)$ [log(3) log(29) known]
 $\log(853)=\log(853)$ [log(853) known]
 $\log(1109)=\log(1109)$ [log(1109) known]

decomposition(28600000)
 $28600000-1=3 \times 9533333$
 $28600000+1=17 \times 37 \times 41 \times 1109$
 $\log(41)=\log(41)$ [log(41) known]
 $\log(629)=\log(17 \times 37)$ [log(17) log(37) known]
 $\log(1109)=\log(1109)$ [log(1109) known]

decomposition(23700000000)
 $23700000000-1=13 \times 17 \times 19 \times 31 \times 163 \times 1117$
 $23700000000+1=397 \times 59697733$
 $\log(5053)=\log(31 \times 163)$ [log(31) log(163) known]
 $\log(4199)=\log(13 \times 17 \times 19)$ [log(13) log(17) log(19) known]
 $\log(1117)$ (assumed to be known now)

decomposition(2740000)
 $2740000-1=3 \times 349 \times 2617$
→ allows the comp. of $\log(2617)$
 $2740000+1=11 \times 223 \times 1117$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

page 149:

$\log(2453)=\log(11 \times 223)$ [$\log(11)$ $\log(223)$ known]

$\log(1117)=\log(1117)$ [$\log(1117)$ known]

decomposition(913000)

$913000-1=3 \times 271 \times 1123$

$913000+1=419 \times 2179$

→ allows the comp. of $\log(2179)$

$\log(813)=\log(3 \times 271)$ [$\log(3)$ $\log(271)$ known]

$\log(1123)=\log(1123)$ [$\log(1123)$ known]

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$\log(7969)=\log(13 \times 613)$ [$\log(13)$ $\log(613)$ known]

$\log(3001)=\log(3001)$ [$\log(3001)$ known]

$\log(1129)=\log(1129)$ [$\log(1129)$ known]

decomposition(925000000)

$925000000-1=3 \times 7^3 \times 11 \times 71 \times 1151$

→ allows the comp. of $\log(1151)$

$925000000+1=925000001$

$\log(781)=\log(11 \times 71)$ [$\log(11)$ $\log(71)$ known]

$\log(1029)=\log(3 \times 7^3)$ [$\log(3)$ $\log(7)$ known]

$\log(1151)=\log(1151)$ [$\log(1151)$ known]

decomposition(7310000)

$7310000-1=661 \times 11059$

$7310000+1=3 \times 29 \times 73 \times 1151$

$\log(6351)=\log(3 \times 29 \times 73)$ [$\log(3)$ $\log(29)$ $\log(73)$ known]

$\log(1151)=\log(1151)$ [$\log(1151)$ known]

decomposition(21200000000)

$21200000000-1=21199999999$

$21200000000+1=3 \times 37 \times 151 \times 1097 \times 1153$

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$\log(3291)=\log(3 \times 1097)$ [$\log(3)$ $\log(1097)$ known]

$\log(5587)=\log(37 \times 151)$ [$\log(37)$ $\log(151)$ known]

$\log(1153)$ (assumed to be known now)

decomposition(1860000000)

$1860000000-1=11 \times 13 \times 29 \times 389 \times 1153$

$1860000000+1=113 \times 16460177$

$\log(4279)=\log(11 \times 389)$ [$\log(11)$ $\log(389)$ known]

$\log(377)=\log(13 \times 29)$ [$\log(13)$ $\log(29)$ known]

$\log(1153)=\log(1153)$ [$\log(1153)$ known]

decomposition(2590000)

$2590000-1=3 \times 61 \times 14153$

$2590000+1=17 \times 131 \times 1163$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ allows the comp. of $\log(1163)$
 $\log(2227)=\log(17 \times 131)$ [$\log(17)$ $\log(131)$ known]
 $\log(1163)=\log(1163)$ [$\log(1163)$ known]
decomposition(899000)
 $899000-1=773 \times 1163$
 $899000+1=3^2 \times 23 \times 43 \times 101$

page 152:

$\log(773)=\log(773)$ [$\log(773)$ known]
 $\log(1163)=\log(1163)$ [$\log(1163)$ known]
decomposition(6170000)
 $6170000-1=11 \times 479 \times 1171$
→ allows the comp. of $\log(1171)$
 $6170000+1=3 \times 2056667$
 $\log(5269)=\log(11 \times 479)$ [$\log(11)$ $\log(479)$ known]
 $\log(1171)=\log(1171)$ [$\log(1171)$ known]
decomposition(5540000)
 $5540000-1=5539999$
 $5540000+1=3 \times 19 \times 83 \times 1171$
 $\log(4731)=\log(3 \times 19 \times 83)$ [$\log(3)$ $\log(19)$ $\log(83)$ known]
 $\log(1171)=\log(1171)$ [$\log(1171)$ known]

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decomposition(804000000)
 $804000000-1=11 \times 199 \times 311 \times 1181$
 $804000000+1=7 \times 47 \times 83 \times 29443$
 $\log(311)=\log(311)$ [$\log(311)$ known]
 $\log(2189)=\log(11 \times 199)$ [$\log(11)$ $\log(199)$ known]
 $\log(1181)=\log(1181)$ [$\log(1181)$ known]
decomposition(500000000)
 $500000000-1=7 \times 23 \times 310559$
 $500000000+1=3 \times 19 \times 739 \times 1187$
 $\log(19)=\log(19)$ [$\log(19)$ known]
 $\log(2217)=\log(3 \times 739)$ [$\log(3)$ $\log(739)$ known]
 $\log(1187)=\log(1187)$ [$\log(1187)$ known]
decomposition(1480000000)
 $1480000000-1=3 \times 7 \times 7047619$
 $1480000000+1=131 \times 947 \times 1193$
 $\log(131)=\log(131)$ [$\log(131)$ known]
 $\log(947)=\log(947)$ [$\log(947)$ known]
 $\log(1193)=\log(1193)$ [$\log(1193)$ known]

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decomposition(466000000)

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

46600000-1=3 × 1753 × 8861
→ allows the comp. of log(8861)
46600000+1=7 × 23 × 241 × 1201
→ allows the comp. of log(1201)
log(161)=log(7 × 23) [log(7) log(23) known]
log(241)=log(241) [log(241) known]
log(1201)=log(1201) [log(1201) known]
decomposition(1440000)
1440000-1=11 × 109 × 1201
1440000+1=337 × 4273
→ allows the comp. of log(4273)
log(1201)=log(1201) [log(1201) known]
decomposition(10040000)
10040000-1=19 × 47 × 11243
10040000+1=3 × 31 × 89 × 1213
→ allows the comp. of log(1213)

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log(8277)=log(3 × 31 × 89) [log(3) log(31) log(89) known]
log(1213)=log(1213) [log(1213) known]
decomposition(877000)
877000-1=3 × 241 × 1213
877000+1=281 × 3121
→ allows the comp. of log(3121)
log(723)=log(3 × 241) [log(3) log(241) known]
log(1213)=log(1213) [log(1213) known]
decomposition(38400000)
38400000-1=11 × 113 × 30893
38400000+1=139 × 227 × 1217
→ allows the comp. of log(1217)
log(139)=log(139) [log(139) known]
log(227)=log(227) [log(227) known]
log(1217)=log(1217) [log(1217) known]
decomposition(673000)
673000-1=3 × 19 × 11807
673000+1=7 × 79 × 1217

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log(553)=log(7 × 79) [log(7) log(79) known]
log(1217)=log(1217) [log(1217) known]
log(57)=log(3 × 19) [log(3) log(19) known]
log(11807)=log(11807)
decomposition(8200000)

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$8200000-1=3^2 \times 911111$$

$$8200000+1=17 \times 19 \times 53 \times 479$$

decomposition(8210000)

$$8210000-1=7^2 \times 137 \times 1223$$

→ allows the comp. of $\log(1223)$

$$8210000+1=3 \times 157 \times 17431$$

$$\log(471)=\log(3 \times 157) \text{ [}\log(3) \log(157) \text{ known]}$$

$$\log(6713)=\log(7^2 \times 137) \text{ [}\log(7) \log(137) \text{ known]}$$

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$$\log(17431)=\log(17431)$$

$$\log(1223)=\log(1223) \text{ [}\log(1223) \text{ known]}$$

decomposition(4020000)

$$4020000-1=199 \times 20201$$

$$4020000+1=19 \times 173 \times 1223$$

$$\log(3287)=\log(19 \times 173) \text{ [}\log(19) \log(173) \text{ known]}$$

$$\log(1223)=\log(1223) \text{ [}\log(1223) \text{ known]}$$

decomposition(1117000000)

$$1117000000-1=3^2 \times 124111111$$

$$1117000000+1=13 \times 151 \times 463 \times 1229$$

→ allows the comp. of $\log(1229)$

$$\log(463)=\log(463) \text{ [}\log(463) \text{ known]}$$

$$\log(1963)=\log(13 \times 151) \text{ [}\log(13) \log(151) \text{ known]}$$

$$\log(1229)=\log(1229) \text{ [}\log(1229) \text{ known]}$$

decomposition(112000000)

$$112000000-1=3 \times 37 \times 821 \times 1229$$

$$112000000+1=29 \times 1409 \times 2741$$

→ allows the comp. of $\log(2741)$

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$$\log(111)=\log(3 \times 37) \text{ [}\log(3) \log(37) \text{ known]}$$

$$\log(821)=\log(821) \text{ [}\log(821) \text{ known]}$$

$$\log(1229)=\log(1229) \text{ [}\log(1229) \text{ known]}$$

decomposition(302000000)

$$302000000-1=7 \times 101 \times 347 \times 1231$$

→ allows the comp. of $\log(1231)$

$$302000000+1=3 \times 673 \times 149579$$

$$\log(707)=\log(7 \times 101) \text{ [}\log(7) \log(101) \text{ known]}$$

$$\log(347)=\log(347) \text{ [}\log(347) \text{ known]}$$

$$\log(1231)=\log(1231) \text{ [}\log(1231) \text{ known]}$$

decomposition(6560000)

$$6560000-1=73^2 \times 1231$$

$$6560000+1=3^3 \times 7 \times 61 \times 569$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(5329)=log(732) [log(73) known]
log(1231)=log(1231) [log(1231) known]
decomposition(87800000000)
87800000000-1=87799999999
87800000000+1=3 × 7 × 37 × 167 × 547 × 1237
→ allows the comp. of log(1237)
```

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```
log(3829)=log(7 × 547) [log(7) log(547) known]
log(167)=log(167) [log(167) known]
log(111)=log(3 × 37) [log(3) log(37) known]
log(1237)=log(1237) [log(1237) known]
decomposition(27000000)
27000000-1=13 × 23 × 73 × 1237
27000000+1=7 × 43 × 271 × 331
log(299)=log(13 × 23) [log(13) log(23) known]
log(73)=log(73) [log(73) known]
log(1237)=log(1237) [log(1237) known]
decomposition(701000000)
701000000-1=7 × 100142857
701000000+1=34 × 132 × 41 × 1249
log(1053)=log(34 × 13) [log(3) log(13) known]
log(533)=log(13 × 41) [log(13) log(41) known]
log(1249)=log(1249) [log(1249) known]
```

page 160:

```
decomposition(850000000)
850000000-1=3 × 853 × 332161
850000000+1=37 × 71 × 257 × 1259
→ allows the comp. of log(1259)
log(2627)=log(37 × 71) [log(37) log(71) known]
log(257)=log(257) [log(257) known]
log(1259)=log(1259) [log(1259) known]
decomposition(6470000)
6470000-1=59 × 109661
6470000+1=32 × 571 × 1259
log(5139)=log(32 × 571) [log(3) log(571) known]
log(1259)=log(1259) [log(1259) known]
decomposition(7580000000)
7580000000-1=11 × 132 × 31 × 103 × 1277
7580000000+1=3 × 7 × 17 × 21232493
log(1859)=log(11 × 132) [log(11) log(13) known]
log(3193)=log(31 × 103) [log(31) log(103) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

page 161:

```
log(1277)    (assumed to be known now)
decomposition(82000000)
  82000000-1=33 × 223 × 13619
  82000000+1=157 × 409 × 1277
log(409)=log(409) [log(409) known]
log(157)=log(157) [log(157) known]
log(1277)=log(1277) [log(1277) known]
decomposition(18100000000)
  18100000000-1=32 × 29 × 59 × 919 × 1279
  → allows the comp. of log(1279)
  18100000000+1=19 × 47 × 20268757
log(8271)=log(32 × 919) [log(3) log(919) known]
log(1711)=log(29 × 59) [log(29) log(59) known]
log(1279)=log(1279) [log(1279) known]
decomposition(66100000)
  66100000-1=3 × 7 × 23 × 107 × 1279
  66100000+1=112 × 47 × 59 × 197
log(483)=log(3 × 7 × 23) [log(3) log(7) log(23) known]
log(107)=log(107) [log(107) known]
log(1279)=log(1279) [log(1279) known]
```

page 162:

```
decomposition(7630000)
  7630000-1=3 × 13 × 31 × 6311
  → allows the comp. of log(6311)
  7630000+1=19 × 313 × 1283
log(5947)=log(19 × 313) [log(19) log(313) known]
log(1283)=log(1283) [log(1283) known]
log(6731)=log(53 × 127) [log(53) log(127) known]
log(139)=log(139) [log(139) known]
log(1289)    (assumed to be known now)
decomposition(7230000)
  7230000-1=72 × 147551
  7230000+1=71 × 79 × 1289
log(5609)=log(71 × 79) [log(71) log(79) known]
log(1289)=log(1289) [log(1289) known]
```

page 163:

```
decomposition(108200000)
  108200000-1=7103 × 15233
  108200000+1=3 × 7 × 13 × 307 × 1291
log(3991)=log(13 × 307) [log(13) log(307) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(21)=log(3 × 7) [log(3) log(7) known]
log(1291)=log(1291) [log(1291) known]
decomposition(898000000)
  898000000-1=3 × 13 × 41 × 433 × 1297
    → allows the comp. of log(1297)
  898000000+1=47 × 59 × 323837
log(5629)=log(13 × 433) [log(13) log(433) known]
log(123)=log(3 × 41) [log(3) log(41) known]
log(1297)=log(1297) [log(1297) known]
decomposition(119800000)
  119800000-1=33 × 11 × 311 × 1297
  119800000+1=113 × 1060177
log(8397)=log(33 × 311) [log(3) log(311) known]
log(11)=log(11) [log(11) known]
log(1297)=log(1297) [log(1297) known]
```

page 164:

```
decomposition(1690000)
  1690000-1=3 × 433 × 1301
  1690000+1=809 × 2089
    → allows the comp. of log(2089)
log(1299)=log(3 × 433) [log(3) log(433) known]
log(1301)=log(1301) [log(1301) known]
decomposition(757000000)
  757000000-1=34 × 7 × 73 × 18289
  757000000+1=472 × 263 × 1303
    → allows the comp. of log(1303)
log(2209)=log(472) [log(47) known]
log(263)=log(263) [log(263) known]
log(1303)=log(1303) [log(1303) known]
decomposition(546000000)
  546000000-1=17 × 1572 × 1303
  546000000+1=546000001
log(2669)=log(17 × 157) [log(17) log(157) known]
log(157)=log(157) [log(157) known]
log(1303)=log(1303) [log(1303) known]
```

page 165:

```
decomposition(122200000000)
  122200000000-1=3 × 72 × 11 × 67 × 863 × 1307
  122200000000+1=103 × 1186407767
log(9493)=log(11 × 863) [log(11) log(863) known]
log(9849)=log(3 × 72 × 67) [log(3) log(7) log(67) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(1307)=log(1307) [log(1307) known]
decomposition(94600000)
  94600000-1=32 × 13 × 613 × 1319
    → allows the comp. of log(1319)
  94600000+1=29 × 1259 × 2591
    → allows the comp. of log(2591)
log(7969)=log(13 × 613) [log(13) log(613) known]
log(9)=log(32) [log(3) known]
log(1319)=log(1319) [log(1319) known]
decomposition(10920000)
  10920000-1=10919999
  10920000+1=17 × 487 × 1319
log(8279)=log(17 × 487) [log(17) log(487) known]
log(1319)=log(1319) [log(1319) known]
```

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```
decomposition(9140000)
  9140000-1=11 × 17 × 37 × 1321
    → allows the comp. of log(1321)
  9140000+1=3 × 13 × 131 × 1789
    → allows the comp. of log(1789)
log(6919)=log(11 × 17 × 37) [log(11) log(17) log(37) known]
log(1321)=log(1321) [log(1321) known]
decomposition(4070000)
  4070000-1=557 × 7307
    → allows the comp. of log(7307)
  4070000+1=3 × 13 × 79 × 1321
log(3081)=log(3 × 13 × 79) [log(3) log(13) log(79) known]
log(1321)=log(1321) [log(1321) known]
decomposition(3820000000)
  3820000000-1=3 × 7 × 43 × 71 × 449 × 1327
  3820000000+1=53 × 97 × 199 × 37339
log(3053)=log(43 × 71) [log(43) log(71) known]
log(9429)=log(3 × 7 × 449) [log(3) log(7) log(449) known]
log(1327) (assumed to be known now)
```

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```
decomposition(1044000000)
  1044000000-1=7 × 167 × 673 × 1327
  1044000000+1=11 × 701 × 135391
log(167)=log(167) [log(167) known]
log(4711)=log(7 × 673) [log(7) log(673) known]
log(1327)=log(1327) [log(1327) known]
```


Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

decomposition(71100000)

$$71100000-1=4133 \times 17203$$

$$71100000+1=7 \times 17 \times 439 \times 1361$$

→ allows the comp. of $\log(1361)$

$$\log(119)=\log(7 \times 17) [\log(7) \log(17) \text{ known}]$$

$$\log(439)=\log(439) [\log(439) \text{ known}]$$

$$\log(1361)=\log(1361) [\log(1361) \text{ known}]$$

decomposition(65000000)

$$65000000-1=163 \times 293 \times 1361$$

$$65000000+1=3 \times 11 \times 23 \times 85639$$

$$\log(163)=\log(163) [\log(163) \text{ known}]$$

$$\log(293)=\log(293) [\log(293) \text{ known}]$$

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$$\log(1361)=\log(1361) [\log(1361) \text{ known}]$$

decomposition(1720000000)

$$1720000000-1=3^5 \times 7 \times 13 \times 569 \times 1367$$

→ allows the comp. of $\log(1367)$

$$1720000000+1=23 \times 79 \times 977 \times 9689$$

→ allows the comp. of $\log(9689)$

$$\log(7397)=\log(13 \times 569) [\log(13) \log(569) \text{ known}]$$

$$\log(1701)=\log(3^5 \times 7) [\log(3) \log(7) \text{ known}]$$

$$\log(1367)=\log(1367) [\log(1367) \text{ known}]$$

decomposition(571000000)

$$571000000-1=3 \times 190333333$$

$$571000000+1=11 \times 13 \times 23 \times 127 \times 1367$$

$$\log(2921)=\log(23 \times 127) [\log(23) \log(127) \text{ known}]$$

$$\log(143)=\log(11 \times 13) [\log(11) \log(13) \text{ known}]$$

$$\log(1367)=\log(1367) [\log(1367) \text{ known}]$$

decomposition(274000000)

$$274000000-1=3 \times 7 \times 13 \times 17 \times 43 \times 1373$$

$$274000000+1=11 \times 24909091$$

$$\log(1039)=\log(1039) [\log(1039) \text{ known}]$$

$$\log(2117)=\log(29 \times 73) [\log(29) \log(73) \text{ known}]$$

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$$\log(9503)=\log(13 \times 17 \times 43) [\log(13) \log(17) \log(43) \text{ known}]$$

$$\log(21)=\log(3 \times 7) [\log(3) \log(7) \text{ known}]$$

$$\log(1373)=\log(1373) [\log(1373) \text{ known}]$$

decomposition(302000000)

$$302000000-1=29 \times 73 \times 1039 \times 1373$$

$$302000000+1=3 \times 100666667$$

$$\log(1373)=\log(1373) [\log(1373) \text{ known}]$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
decomposition(841000000)
  841000000-1=3 × 7 × 47 × 617 × 1381
  841000000+1=841000001
  log(4319)=log(7 × 617) [log(7) log(617) known]
  log(141)=log(3 × 47) [log(3) log(47) known]
  log(1381)=log(1381) [log(1381) known]
decomposition(859000000)
  859000000-1=3 × 97 × 211 × 1399
  → allows the comp. of log(1399)
  859000000+1=11 × 29 × 113 × 2383
  → allows the comp. of log(2383)
```

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```
  log(291)=log(3 × 97) [log(3) log(97) known]
  log(211)=log(211) [log(211) known]
  log(1399)=log(1399) [log(1399) known]
decomposition(540000000)
  540000000-1=317 × 170347
  540000000+1=113 × 29 × 1399
  log(121)=log(112) [log(11) known]
  log(319)=log(11 × 29) [log(11) log(29) known]
  log(1399)=log(1399) [log(1399) known]
decomposition(1297000000)
  1297000000-1=33 × 103 × 331 × 1409
  1297000000+1=11 × 117909091
  log(2781)=log(33 × 103) [log(3) log(103) known]
  log(331)=log(331) [log(331) known]
  log(1409)=log(1409) [log(1409) known]
decomposition(1288000000)
  1288000000-1=32 × 89 × 113 × 1423
  1288000000+1=11 × 467 × 25073
```

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```
  log(1017)=log(32 × 113) [log(3) log(113) known]
  log(89)=log(89) [log(89) known]
  log(1423)=log(1423) [log(1423) known]
decomposition(5660000000)
  5660000000-1=173 × 32716763
  5660000000+1=32 × 37 × 43 × 277 × 1427
  → allows the comp. of log(1427)
  log(2493)=log(32 × 277) [log(3) log(277) known]
  log(1591)=log(37 × 43) [log(37) log(43) known]
  log(1427)=log(1427) [log(1427) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

decomposition(9080000)

$$9080000-1=2819 \times 3221$$

$$9080000+1=3^2 \times 7 \times 101 \times 1427$$

$$\log(6363)=\log(3^2 \times 7 \times 101) [\log(3) \log(7) \log(101) \text{ known}]$$

$$\log(1427)=\log(1427) [\log(1427) \text{ known}]$$

decomposition(52400000)

$$52400000-1=227 \times 359 \times 643$$

$$52400000+1=3 \times 17 \times 719 \times 1429$$

→ allows the comp. of $\log(1429)$

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$$\log(51)=\log(3 \times 17) [\log(3) \log(17) \text{ known}]$$

$$\log(719)=\log(719) [\log(719) \text{ known}]$$

$$\log(1429)=\log(1429) [\log(1429) \text{ known}]$$

decomposition(9530000)

$$9530000-1=41 \times 232439$$

$$9530000+1=3^3 \times 13 \times 19 \times 1429$$

$$\log(6669)=\log(3^3 \times 13 \times 19) [\log(3) \log(13) \log(19) \text{ known}]$$

$$\log(1429)=\log(1429) [\log(1429) \text{ known}]$$

decomposition(741000000)

$$741000000-1=37^2 \times 541271$$

$$741000000+1=7^2 \times 61 \times 173 \times 1433$$

→ allows the comp. of $\log(1433)$

$$\log(8477)=\log(7^2 \times 173) [\log(7) \log(173) \text{ known}]$$

$$\log(61)=\log(61) [\log(61) \text{ known}]$$

$$\log(1433)=\log(1433) [\log(1433) \text{ known}]$$

decomposition(24500000)

$$24500000-1=193 \times 126943$$

$$24500000+1=3 \times 41 \times 139 \times 1433$$

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$$\log(123)=\log(3 \times 41) [\log(3) \log(41) \text{ known}]$$

$$\log(139)=\log(139) [\log(139) \text{ known}]$$

$$\log(1433)=\log(1433) [\log(1433) \text{ known}]$$

decomposition(9470000000)

$$9470000000-1=9469999999$$

$$9470000000+1=3 \times 7 \times 11 \times 31 \times 919 \times 1439$$

$$\log(6433)=\log(7 \times 919) [\log(7) \log(919) \text{ known}]$$

$$\log(1023)=\log(3 \times 11 \times 31) [\log(3) \log(11) \log(31) \text{ known}]$$

$$\log(1439)=\log(1439) [\log(1439) \text{ known}]$$

decomposition(1247000000)

$$1247000000-1=7 \times 659 \times 270323$$

$$1247000000+1=3 \times 13 \times 19 \times 1163 \times 1447$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ allows the comp. of $\log(1447)$
 $\log(3489)=\log(3 \times 1163)$ [$\log(3)$ $\log(1163)$ known]
 $\log(247)=\log(13 \times 19)$ [$\log(13)$ $\log(19)$ known]
 $\log(1447)=\log(1447)$ [$\log(1447)$ known]
decomposition(11890000)
 $11890000-1=3^2 \times 11 \times 83 \times 1447$
 $11890000+1=11890001$
 $\log(8217)=\log(3^2 \times 11 \times 83)$ [$\log(3)$ $\log(11)$ $\log(83)$ known]
 $\log(1447)=\log(1447)$ [$\log(1447)$ known]

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decomposition(1123000000)
 $1123000000-1=3 \times 11 \times 47 \times 499 \times 1451$
→ allows the comp. of $\log(1451)$
 $1123000000+1=23 \times 661 \times 73867$
 $\log(5489)=\log(11 \times 499)$ [$\log(11)$ $\log(499)$ known]
 $\log(141)=\log(3 \times 47)$ [$\log(3)$ $\log(47)$ known]
 $\log(1451)=\log(1451)$ [$\log(1451)$ known]
decomposition(328000000)
 $328000000-1=3 \times 109333333$
 $328000000+1=7 \times 43 \times 751 \times 1451$
 $\log(301)=\log(7 \times 43)$ [$\log(7)$ $\log(43)$ known]
 $\log(751)=\log(751)$ [$\log(751)$ known]
 $\log(1451)=\log(1451)$ [$\log(1451)$ known]
decomposition(28900000000)
 $28900000000-1=3^2 \times 13 \times 47 \times 1453 \times 3617$
 $28900000000+1=77237 \times 374173$
 $\log(5499)=\log(3^2 \times 13 \times 47)$ [$\log(3)$ $\log(13)$ $\log(47)$ known]
 $\log(3617)=\log(3617)$ [$\log(3617)$ known]
 $\log(1453)=\log(1453)$ [$\log(1453)$ known]

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decomposition(13220000)
 $13220000-1=13 \times 17 \times 41 \times 1459$
→ allows the comp. of $\log(1459)$
 $13220000+1=3^2 \times 1468889$
 $\log(9061)=\log(13 \times 17 \times 41)$ [$\log(13)$ $\log(17)$ $\log(41)$ known]
 $\log(1459)=\log(1459)$ [$\log(1459)$ known]
decomposition(1370000)
 $1370000-1=37 \times 61 \times 607$
 $1370000+1=3 \times 313 \times 1459$
 $\log(939)=\log(3 \times 313)$ [$\log(3)$ $\log(313)$ known]
 $\log(1459)=\log(1459)$ [$\log(1459)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

decomposition(68300000)

$$68300000-1=17 \times 4017647$$

$$68300000+1=3^2 \times 7 \times 11 \times 67 \times 1471$$

→ allows the comp. of $\log(1471)$

$$\log(693)=\log(3^2 \times 7 \times 11) [\log(3) \log(7) \log(11) \text{ known}]$$

$$\log(67)=\log(67) [\log(67) \text{ known}]$$

$$\log(1471)=\log(1471) [\log(1471) \text{ known}]$$

decomposition(94600000)

$$94600000-1=3^2 \times 151 \times 6961$$

→ allows the comp. of $\log(6961)$

$$94600000+1=59 \times 109 \times 1471$$

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$$\log(6431)=\log(59 \times 109) [\log(59) \log(109) \text{ known}]$$

$$\log(1471)=\log(1471) [\log(1471) \text{ known}]$$

decomposition(102500000)

$$102500000-1=37 \times 139 \times 1993$$

→ allows the comp. of $\log(1993)$

$$102500000+1=3^2 \times 769 \times 1481$$

→ allows the comp. of $\log(1481)$

$$\log(6921)=\log(3^2 \times 769) [\log(3) \log(769) \text{ known}]$$

$$\log(1481)=\log(1481) [\log(1481) \text{ known}]$$

decomposition(13640000)

$$13640000-1=7 \times 13^2 \times 1153$$

$$13640000+1=3 \times 307 \times 1481$$

$$\log(921)=\log(3 \times 307) [\log(3) \log(307) \text{ known}]$$

$$\log(1481)=\log(1481) [\log(1481) \text{ known}]$$

decomposition(1415000000)

$$1415000000-1=7^2 \times 647 \times 44633$$

$$1415000000+1=3 \times 47 \times 67 \times 101 \times 1483$$

→ allows the comp. of $\log(1483)$

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$$\log(6767)=\log(67 \times 101) [\log(67) \log(101) \text{ known}]$$

$$\log(141)=\log(3 \times 47) [\log(3) \log(47) \text{ known}]$$

$$\log(1483)=\log(1483) [\log(1483) \text{ known}]$$

decomposition(61500000)

$$61500000-1=587 \times 10477$$

$$61500000+1=11 \times 13 \times 29 \times 1483$$

$$\log(4147)=\log(11 \times 13 \times 29) [\log(11) \log(13) \log(29) \text{ known}]$$

$$\log(1483)=\log(1483) [\log(1483) \text{ known}]$$

decomposition(34300000000)

$$34300000000-1=3^2 \times 37 \times 113 \times 613 \times 1487$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$34300000000+1=1229 \times 27908869$
 $\log(4181)=\log(37 \times 113)$ [$\log(37)$ $\log(113)$ known]
 $\log(5517)=\log(3^2 \times 613)$ [$\log(3)$ $\log(613)$ known]
 $\log(1487)$ (assumed to be known now)
decomposition(49700000)
 $49700000-1=113 \times 439823$
 $49700000+1=3 \times 13 \times 857 \times 1487$

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$\log(39)=\log(3 \times 13)$ [$\log(3)$ $\log(13)$ known]
 $\log(857)=\log(857)$ [$\log(857)$ known]
 $\log(1487)=\log(1487)$ [$\log(1487)$ known]
decomposition(1074000000)
 $1074000000-1=37 \times 109 \times 283 \times 941$
 $1074000000+1=811 \times 887 \times 1493$
 $\log(811)=\log(811)$ [$\log(811)$ known]
 $\log(887)=\log(887)$ [$\log(887)$ known]
 $\log(1493)=\log(1493)$ [$\log(1493)$ known]
decomposition(1200000000)
 $1200000000-1=7 \times 29 \times 397 \times 1489$
→ allows the comp. of $\log(1489)$
 $1200000000+1=11 \times 277 \times 39383$
 $\log(203)=\log(7 \times 29)$ [$\log(7)$ $\log(29)$ known]
 $\log(397)=\log(397)$ [$\log(397)$ known]
 $\log(1489)=\log(1489)$ [$\log(1489)$ known]
decomposition(289000000)
 $289000000-1=3^2 \times 43 \times 53 \times 1409$
 $289000000+1=13 \times 1489 \times 1493$

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$\log(13)=\log(13)$ [$\log(13)$ known]
 $\log(1493)=\log(1493)$ [$\log(1493)$ known]
 $\log(1489)=\log(1489)$ [$\log(1489)$ known]
decomposition(1156000000)
 $1156000000-1=3 \times 7 \times 11^2 \times 281 \times 1619$
→ allows the comp. of $\log(1619)$
 $1156000000+1=13 \times 29 \times 1613 \times 1901$
 $\log(847)=\log(7 \times 11^2)$ [$\log(7)$ $\log(11)$ known]
 $\log(843)=\log(3 \times 281)$ [$\log(3)$ $\log(281)$ known]
 $\log(1619)=\log(1619)$ [$\log(1619)$ known]
decomposition(1392000000)
 $1392000000-1=139199999$
 $1392000000+1=127 \times 677 \times 1619$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(127)=log(127) [log(127) known]
log(677)=log(677) [log(677) known]
log(1619)=log(1619) [log(1619) known]
decomposition(10870000000)
  10870000000-1=3 × 1493 × 1499 × 1619
  10870000000+1=7 × 607 × 2558249
```

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```
log(4479)=log(3 × 1493) [log(3) log(1493) known]
log(1619)=log(1619) [log(1619) known]
log(1499) (assumed to be known now)
decomposition(2250000)
  2250000-1=19 × 79 × 1499
  2250000+1=13 × 17 × 10181
log(1501)=log(19 × 79) [log(19) log(79) known]
log(1499)=log(1499) [log(1499) known]
decomposition(94300000)
  94300000-1=3 × 71 × 293 × 1511
  → allows the comp. of log(1511)
  94300000+1=472 × 42689
log(213)=log(3 × 71) [log(3) log(71) known]
log(293)=log(293) [log(293) known]
log(1511)=log(1511) [log(1511) known]
decomposition(3640000)
  3640000-1=3 × 11 × 73 × 1511
  3640000+1=19 × 191579
```

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```
log(2409)=log(3 × 11 × 73) [log(3) log(11) log(73) known]
log(1511)=log(1511) [log(1511) known]
decomposition(11290000)
  11290000-1=3 × 7 × 353 × 1523
  11290000+1=523 × 21587
log(7413)=log(3 × 7 × 353) [log(3) log(7) log(353) known]
log(1523)=log(1523) [log(1523) known]
decomposition(10300000000)
  10300000000-1=3 × 61 × 97 × 379 × 1531
  → allows the comp. of log(1531)
  10300000000+1=17 × 23 × 26342711
log(5917)=log(61 × 97) [log(61) log(97) known]
log(1137)=log(3 × 379) [log(3) log(379) known]
log(1531)=log(1531) [log(1531) known]
decomposition(42300000)
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$42300000-1=7 \times 1531 \times 3947$
→ allows the comp. of $\log(3947)$
 $42300000+1=42300001$

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decomposition(110800000)
 $110800000-1=3^2 \times 17^2 \times 41 \times 1039$
 $110800000+1=13 \times 19 \times 293 \times 1531$
 $\log(293)=\log(293)$ [log(293) known]
 $\log(247)=\log(13 \times 19)$ [log(13) log(19) known]
 $\log(1531)=\log(1531)$ [log(1531) known]
 $\log(7)=\log(7)$ [log(7) known]
 $\log(3947)=\log(3947)$ [log(3947) known]
decomposition(919000000)
 $919000000-1=3^6 \times 19 \times 43 \times 1543$
→ allows the comp. of $\log(1543)$
 $919000000+1=919000001$
 $\log(729)=\log(3^6)$ [log(3) known]
 $\log(817)=\log(19 \times 43)$ [log(19) log(43) known]
 $\log(1543)=\log(1543)$ [log(1543) known]

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decomposition(624000000)
 $624000000-1=7 \times 499 \times 178643$
 $624000000+1=283 \times 1429 \times 1543$
 $\log(283)=\log(283)$ [log(283) known]
 $\log(1429)=\log(1429)$ [log(1429) known]
 $\log(1543)=\log(1543)$ [log(1543) known]
decomposition(450000000)
 $450000000-1=11 \times 19 \times 139 \times 1549$
 $450000000+1=41 \times 347 \times 3163$
→ allows the comp. of $\log(3163)$
 $\log(139)=\log(139)$ [log(139) known]
 $\log(209)=\log(11 \times 19)$ [log(11) log(19) known]
 $\log(1549)=\log(1549)$ [log(1549) known]
decomposition(200000000)
 $200000000-1=89 \times 1447 \times 1553$
→ allows the comp. of $\log(1553)$
 $200000000+1=3 \times 66666667$

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$\log(89)=\log(89)$ [log(89) known]
 $\log(1447)=\log(1447)$ [log(1447) known]
 $\log(1553)=\log(1553)$ [log(1553) known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
decomposition(110600000)
  110600000-1=43 × 2572093
  110600000+1=32 × 41 × 193 × 1553
  log(193)=log(193) [log(193) known]
  log(369)=log(32 × 41) [log(3) log(41) known]
  log(1553)=log(1553) [log(1553) known]
```

```
decomposition(2645000000)
  2645000000-1=619 × 1531 × 2791
  2645000000+1=34 × 7 × 1049 × 4447
  log(619)=log(619) [log(619) known]
  log(1531)=log(1531) [log(1531) known]
  log(2791) (assumed to be known now)
```

```
decomposition(1460000000)
  1460000000-1=145999999
  1460000000+1=3 × 7 × 47 × 53 × 2791
```

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```
  log(159)=log(3 × 53) [log(3) log(53) known]
  log(329)=log(7 × 47) [log(7) log(47) known]
  log(2791)=log(2791) [log(2791) known]
```

```
decomposition(27910000000)
  27910000000-1=32 × 7 × 263 × 397 × 4243
  → allows the comp. of log(4243)
  27910000000+1=132 × 165147929
  log(2367)=log(32 × 263) [log(3) log(263) known]
  log(2779)=log(7 × 397) [log(7) log(397) known]
  log(4243)=log(4243) [log(4243) known]
```

```
decomposition(17910000000)
  17910000000-1=3881 × 461479
  17910000000+1=7 × 47 × 1283 × 4243
  log(329)=log(7 × 47) [log(7) log(47) known]
  log(1283)=log(1283) [log(1283) known]
  log(4243)=log(4243) [log(4243) known]
```

```
decomposition(8486000000)
  8486000000-1=13 × 17 × 389 × 9871
  → allows the comp. of log(9871)
  8486000000+1=32 × 29 × 41 × 79301
  log(221)=log(13 × 17) [log(13) log(17) known]
```

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```
  log(389)=log(389) [log(389) known]
  log(9871)=log(9871) [log(9871) known]
```

```
decomposition(589200000)
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$58920000-1=47 \times 127 \times 9871$
 $58920000+1=7^2 \times 67 \times 131 \times 137$
 $\log(5969)=\log(47 \times 127)$ [$\log(47)$ $\log(127)$ known]
 $\log(9871)=\log(9871)$ [$\log(9871)$ known]
decomposition(517200000)

$517200000-1=2957 \times 174907$
 $517200000+1=31 \times 43 \times 67 \times 5791$
→ allows the comp. of $\log(5791)$
 $\log(67)=\log(67)$ [$\log(67)$ known]
 $\log(1333)=\log(31 \times 43)$ [$\log(31)$ $\log(43)$ known]
 $\log(5791)=\log(5791)$ [$\log(5791)$ known]
decomposition(61900000)

$61900000-1=3 \times 7 \times 509 \times 5791$
 $61900000+1=37 \times 71 \times 23563$
 $\log(21)=\log(3 \times 7)$ [$\log(3)$ $\log(7)$ known]
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$\log(509)=\log(509)$ [$\log(509)$ known]
 $\log(5791)=\log(5791)$ [$\log(5791)$ known]
decomposition(641000000)

$641000000-1=71 \times 1559 \times 5791$
→ allows the comp. of $\log(1559)$
 $641000000+1=3 \times 613 \times 348559$
 $\log(71)=\log(71)$ [$\log(71)$ known]
 $\log(5791)=\log(5791)$ [$\log(5791)$ known]
 $\log(1559)=\log(1559)$ [$\log(1559)$ known]
decomposition(138500000)

$138500000-1=11 \times 331 \times 38039$
 $138500000+1=3^2 \times 1559 \times 9871$
 $\log(9)=\log(3^2)$ [$\log(3)$ known]
 $\log(9871)=\log(9871)$ [$\log(9871)$ known]
 $\log(1559)=\log(1559)$ [$\log(1559)$ known]
decomposition(401000000)

$401000000-1=400999999$
 $401000000+1=3 \times 197 \times 433 \times 1567$
→ allows the comp. of $\log(1567)$
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$\log(433)=\log(433)$ [$\log(433)$ known]
 $\log(591)=\log(3 \times 197)$ [$\log(3)$ $\log(197)$ known]
 $\log(1567)=\log(1567)$ [$\log(1567)$ known]
decomposition(6420000)
 $6420000-1=17 \times 241 \times 1567$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
6420000+1=7 × 827 × 1109
log(4097)=log(17 × 241) [log(17) log(241) known]
log(1567)=log(1567) [log(1567) known]
log(188000000)=log(28 × 56 × 47) [log(2) log(5) log(47) known]
log(253)=log(11 × 23) [log(11) log(23) known]
log(473)=log(11 × 43) [log(11) log(43) known]
log(1571) (assumed to be known now)
decomposition(30900000)
30900000-1=13 × 17 × 89 × 1571
30900000+1=11 × 2809091
```

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```
log(89)=log(89) [log(89) known]
log(221)=log(13 × 17) [log(13) log(17) known]
log(1571)=log(1571) [log(1571) known]
decomposition(900000000)
900000000-1=19 × 131 × 229 × 1579
900000000+1=409 × 2200489
log(229)=log(229) [log(229) known]
log(2489)=log(19 × 131) [log(19) log(131) known]
log(1579)=log(1579) [log(1579) known]
decomposition(670000000)
670000000-1=3 × 223333333
670000000+1=11 × 109 × 353 × 1583
→ allows the comp. of log(1583)
log(353)=log(353) [log(353) known]
log(1199)=log(11 × 109) [log(11) log(109) known]
log(1583)=log(1583) [log(1583) known]
decomposition(36800000)
36800000-1=4517 × 8147
36800000+1=34 × 7 × 41 × 1583
```

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```
log(41)=log(41) [log(41) known]
log(567)=log(34 × 7) [log(3) log(7) known]
log(1583)=log(1583) [log(1583) known]
decomposition(56320000000)
56320000000-1=3 × 72 × 13 × 97 × 479 × 6343
→ allows the comp. of log(6343)
56320000000+1=8009 × 70320889
log(291)=log(3 × 97) [log(3) log(97) known]
log(479)=log(479) [log(479) known]
log(637)=log(72 × 13) [log(7) log(13) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(6343)=log(6343) [log(6343) known]
decomposition(58400000)
  58400000-1=7 × 8342857
  58400000+1=33 × 11 × 31 × 6343
log(9207)=log(33 × 11 × 31) [log(3) log(11) log(31) known]
log(6343)=log(6343) [log(6343) known]
decomposition(1327000000)
  1327000000-1=3 × 132 × 421 × 6217
  → allows the comp. of log(6217)
  1327000000+1=131 × 1597 × 6343
  → allows the comp. of log(1597)
log(6343)=log(6343) [log(6343) known]
log(131)=log(131) [log(131) known]
```

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```
log(1597)=log(1597) [log(1597) known]
decomposition(49400000)
  49400000-1=11 × 109 × 41201
  49400000+1=32 × 7 × 491 × 1597
log(63)=log(32 × 7) [log(3) log(7) known]
log(491)=log(491) [log(491) known]
log(1597)=log(1597) [log(1597) known]
decomposition(707000000)
  707000000-1=383 × 1153 × 1601
  → allows the comp. of log(1601)
  707000000+1=3 × 239 × 986053
log(383)=log(383) [log(383) known]
log(1153)=log(1153) [log(1153) known]
log(1601)=log(1601) [log(1601) known]
decomposition(93500000)
  93500000-1=31 × 37 × 81517
  93500000+1=34 × 7 × 103 × 1601
log(81)=log(34) [log(3) known]
log(721)=log(7 × 103) [log(7) log(103) known]
log(1601)=log(1601) [log(1601) known]
```

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```
decomposition(94400000)
  94400000-1=19 × 41 × 121181
  94400000+1=32 × 61 × 107 × 1607
  → allows the comp. of log(1607)
log(963)=log(32 × 107) [log(3) log(107) known]
log(61)=log(61) [log(61) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(1607)=log(1607) [log(1607) known]
decomposition(14050000)
  14050000-1=32 × 1561111
  14050000+1=7 × 1249 × 1607
log(8743)=log(7 × 1249) [log(7) log(1249) known]
log(1607)=log(1607) [log(1607) known]
decomposition(136300000)
  136300000-1=3 × 11 × 17 × 151 × 1609
  136300000+1=23 × 5926087
log(453)=log(3 × 151) [log(3) log(151) known]
log(187)=log(11 × 17) [log(11) log(17) known]
log(1609)=log(1609) [log(1609) known]
decomposition(134400000)
  134400000-1=97 × 859 × 1613
  → allows the comp. of log(1613)
  134400000+1=134400001
```

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```
log(859)=log(859) [log(859) known]
log(97)=log(97) [log(97) known]
log(1613)=log(1613) [log(1613) known]
decomposition(26900000)
  26900000-1=7 × 37 × 283 × 367
  26900000+1=32 × 17 × 109 × 1613
log(153)=log(32 × 17) [log(3) log(17) known]
log(109)=log(109) [log(109) known]
log(1613)=log(1613) [log(1613) known]
decomposition(8460000)
  8460000-1=17 × 307 × 1621
  → allows the comp. of log(1621)
  8460000+1=11 × 769091
log(5219)=log(17 × 307) [log(17) log(307) known]
log(1621)=log(1621) [log(1621) known]
```

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```
decomposition(7750000)
  7750000-1=36 × 10631
  7750000+1=7 × 683 × 1621
log(4781)=log(7 × 683) [log(7) log(683) known]
log(1621)=log(1621) [log(1621) known]
decomposition(3730000000)
  3730000000-1=3 × 11 × 23 × 269 × 18269
  3730000000+1=72 × 13 × 59 × 61 × 1627
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(793)=\log(13 \times 61)$ [$\log(13)$ $\log(61)$ known]
 $\log(2891)=\log(7^2 \times 59)$ [$\log(7)$ $\log(59)$ known]
 $\log(1627)$ (assumed to be known now)
decomposition(150600000)
 $150600000-1=11 \times 197 \times 69497$
 $150600000+1=151 \times 613 \times 1627$
 $\log(151)=\log(151)$ [$\log(151)$ known]
 $\log(613)=\log(613)$ [$\log(613)$ known]
 $\log(1627)=\log(1627)$ [$\log(1627)$ known]
decomposition(122000000000)
 $122000000000-1=121999999999$
 $122000000000+1=3 \times 11 \times 31 \times 263 \times 277 \times 1637$
→ allows the comp. of $\log(1637)$

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$\log(8153)=\log(31 \times 263)$ [$\log(31)$ $\log(263)$ known]
 $\log(9141)=\log(3 \times 11 \times 277)$ [$\log(3)$ $\log(11)$ $\log(277)$ known]
 $\log(1637)=\log(1637)$ [$\log(1637)$ known]
decomposition(775000000)
 $775000000-1=3^2 \times 41 \times 1283 \times 1637$
 $775000000+1=775000001$
 $\log(369)=\log(3^2 \times 41)$ [$\log(3)$ $\log(41)$ known]
 $\log(1283)=\log(1283)$ [$\log(1283)$ known]
 $\log(1637)=\log(1637)$ [$\log(1637)$ known]
decomposition(2000000)
 $2000000-1=17 \times 71 \times 1657$
→ allows the comp. of $\log(1657)$
 $2000000+1=3 \times 666667$
 $\log(1207)=\log(17 \times 71)$ [$\log(17)$ $\log(71)$ known]
 $\log(1657)=\log(1657)$ [$\log(1657)$ known]

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decomposition(14570000)
 $14570000-1=14569999$
 $14570000+1=3^2 \times 977 \times 1657$
 $\log(8793)=\log(3^2 \times 977)$ [$\log(3)$ $\log(977)$ known]
 $\log(1657)=\log(1657)$ [$\log(1657)$ known]
decomposition(70300000)
 $70300000-1=3^2 \times 7 \times 11 \times 61 \times 1663$
→ allows the comp. of $\log(1663)$
 $70300000+1=70300001$
 $\log(63)=\log(3^2 \times 7)$ [$\log(3)$ $\log(7)$ known]
 $\log(671)=\log(11 \times 61)$ [$\log(11)$ $\log(61)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(1663)=log(1663) [log(1663) known]
decomposition(1209000)
  1209000-1=11 × 131 × 839
  1209000+1=727 × 1663
log(727)=log(727) [log(727) known]
log(1663)=log(1663) [log(1663) known]
```

page 197:

```
decomposition(41700000000)
  41700000000-1=7 × 37 × 59 × 1637 × 1667
  41700000000+1=11
log(59)=log(59) [log(59) known]
log(259)=log(7 × 37) [log(7) log(37) known]
log(1637)=log(1637) [log(1637) known]
log(1667)=log(1667) [log(1667) known]
decomposition(69300000000)
  69300000000-1=192 × 11833 × 16223
  69300000000+1=31 × 37 × 43 × 239 × 5879
  → allows the comp. of log(5879)
log(1591)=log(37 × 43) [log(37) log(43) known]
log(7409)=log(31 × 239) [log(31) log(239) known]
log(5879)=log(5879) [log(5879) known]
decomposition(48280000000)
  48280000000-1=3 × 7 × 11 × 73 × 487 × 5879
  48280000000+1=83 × 293 × 1985279
log(1533)=log(3 × 7 × 73) [log(3) log(7) log(73) known]
log(5357)=log(11 × 487) [log(11) log(487) known]
log(5879)=log(5879) [log(5879) known]
```

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```
decomposition(587900000)
  587900000-1=43 × 929 × 14717
  587900000+1=3 × 13 × 17 × 103 × 8609
  → allows the comp. of log(8609)
log(39)=log(3 × 13) [log(3) log(13) known]
log(1751)=log(17 × 103) [log(17) log(103) known]
log(8609)=log(8609) [log(8609) known]
decomposition(8336000000)
  8336000000-1=211 × 39507109
  8336000000+1=3 × 73 × 941 × 8609
log(1029)=log(3 × 73) [log(3) log(7) known]
log(941)=log(941) [log(941) known]
log(8609)=log(8609) [log(8609) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
decomposition(106100000)
  106100000-1=151 × 421 × 1669
    → allows the comp. of log(1669)
  106100000+1=32 × 7 × 1684127
log(151)=log(151) [log(151) known]
log(421)=log(421) [log(421) known]
log(1669)=log(1669) [log(1669) known]
```

page 199:

```
decomposition(273000000)
  273000000-1=19 × 1669 × 8609
  273000000+1=97 × 2814433
log(19)=log(19) [log(19) known]
log(8609)=log(8609) [log(8609) known]
log(1669)=log(1669) [log(1669) known]
```

```
decomposition(3810000000)
  3810000000-1=13 × 172 × 599 × 1693
  3810000000+1=37 × 1753 × 58741
log(289)=log(172) [log(17) known]
log(7787)=log(13 × 599) [log(13) log(599) known]
log(1693)=log(1693) [log(1693) known]
```

```
decomposition(258000000)
  258000000-1=15643 × 16493
  258000000+1=7 × 37 × 587 × 1697
log(259)=log(7 × 37) [log(7) log(37) known]
log(587)=log(587) [log(587) known]
log(1697)=log(1697) [log(1697) known]
```

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```
decomposition(81400000)
  81400000-1=3 × 59 × 271 × 1697
  81400000+1=109 × 797 × 937
log(177)=log(3 × 59) [log(3) log(59) known]
log(271)=log(271) [log(271) known]
log(1697)=log(1697) [log(1697) known]
```

```
decomposition(2700000000)
  2700000000-1=7 × 757 × 1699 × 2999
    → allows the comp. of log(1699)
  2700000000+1=13 × 613 × 1129 × 3001
log(2999)=log(2999) [log(2999) known]
log(5299)=log(7 × 757) [log(7) log(757) known]
log(1699)=log(1699) [log(1699) known]
```

```
decomposition(155800000)
```


Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$155800000-1=3^2 \times 23 \times 443 \times 1699$
 $155800000+1=7 \times 1423 \times 15641$
 $\log(207)=\log(3^2 \times 23)$ [log(3) log(23) known]
 $\log(443)=\log(443)$ [log(443) known]
 $\log(1699)=\log(1699)$ [log(1699) known]

decomposition(11320000000)

$11320000000-1=3 \times 7 \times 11^2 \times 23 \times 109 \times 1777$
 $11320000000+1=17 \times 41 \times 1867 \times 8699$

page 201:

$\log(2507)=\log(23 \times 109)$ [log(23) log(109) known]
 $\log(2541)=\log(3 \times 7 \times 11^2)$ [log(3) log(7) log(11) known]
 $\log(1777)$ (assumed to be known now)

decomposition(528000000)

$528000000-1=7^2 \times 37 \times 29123$
 $528000000+1=43 \times 691 \times 1777$
 $\log(1777)=\log(1777)$ [log(1777) known]

decomposition(1504000000000)

$1504000000000-1=3^2 \times 7^2 \times 1123 \times 1709 \times 1777$
→ allows the comp. of log(1709)
 $1504000000000+1=1504000000001$

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$\log(441)=\log(3^2 \times 7^2)$ [log(3) log(7) known]
 $\log(1123)=\log(1123)$ [log(1123) known]
 $\log(1777)=\log(1777)$ [log(1777) known]
 $\log(1709)=\log(1709)$ [log(1709) known]

decomposition(34100000000)

$34100000000-1=13 \times 127 \times 139^2 \times 1069$
 $34100000000+1=3^3 \times 17 \times 29 \times 1499 \times 1709$
 $\log(4437)=\log(3^2 \times 17 \times 29)$ [log(3) log(17) log(29) known]
 $\log(4497)=\log(3 \times 1499)$ [log(3) log(1499) known]
 $\log(1709)=\log(1709)$ [log(1709) known]

decomposition(10100000000)

$10100000000-1=17 \times 47 \times 179 \times 70619$
 $10100000000+1=3 \times 7^2 \times 13 \times 37 \times 83 \times 1721$
→ allows the comp. of log(1721)
 $\log(1911)=\log(3 \times 7^2 \times 13)$ [log(3) log(7) log(13) known]
 $\log(3071)=\log(37 \times 83)$ [log(37) log(83) known]
 $\log(1721)=\log(1721)$ [log(1721) known]

decomposition(1495000000)

$1495000000-1=3^2 \times 166111111$
 $1495000000+1=11 \times 157 \times 503 \times 1721$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

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$\log(157)=\log(157)$ [$\log(157)$ known]
 $\log(5533)=\log(11 \times 503)$ [$\log(11)$ $\log(503)$ known]
 $\log(1721)=\log(1721)$ [$\log(1721)$ known]
decomposition(295000000)
 $295000000-1=3 \times 7 \times 31 \times 263 \times 1723$
→ allows the comp. of $\log(1723)$
 $295000000+1=23 \times 37 \times 346651$
 $\log(263)=\log(263)$ [$\log(263)$ known]
 $\log(651)=\log(3 \times 7 \times 31)$ [$\log(3)$ $\log(7)$ $\log(31)$ known]
decomposition(122700000)
 $122700000-1=17 \times 59 \times 71 \times 1723$
 $122700000+1=122700001$
 $\log(59)=\log(59)$ [$\log(59)$ known]
 $\log(1207)=\log(17 \times 71)$ [$\log(17)$ $\log(71)$ known]
 $\log(1723)=\log(1723)$ [$\log(1723)$ known]
decomposition(235000000)
 $235000000-1=3^2 \times 13 \times 19 \times 61 \times 1733$
→ allows the comp. of $\log(1733)$
 $235000000+1=235000001$

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$\log(117)=\log(3^2 \times 13)$ [$\log(3)$ $\log(13)$ known]
 $\log(1159)=\log(19 \times 61)$ [$\log(19)$ $\log(61)$ known]
 $\log(1733)=\log(1733)$ [$\log(1733)$ known]
decomposition(111600000)
 $111600000-1=7^2 \times 2277551$
 $111600000+1=71 \times 907 \times 1733$
 $\log(71)=\log(71)$ [$\log(71)$ known]
 $\log(907)=\log(907)$ [$\log(907)$ known]
 $\log(1733)=\log(1733)$ [$\log(1733)$ known]
decomposition(273900000)
 $273900000-1=273899999$
 $273900000+1=173 \times 487 \times 3251$
→ allows the comp. of $\log(3251)$
 $\log(173)=\log(173)$ [$\log(173)$ known]
 $\log(487)=\log(487)$ [$\log(487)$ known]
 $\log(3251)=\log(3251)$ [$\log(3251)$ known]
decomposition(385000000)
 $385000000-1=3 \times 41 \times 31300813$
 $385000000+1=19 \times 157 \times 397 \times 3251$

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Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(397)=log(397) [log(397) known]
log(2983)=log(19 × 157) [log(19) log(157) known]
log(3251)=log(3251) [log(3251) known]
decomposition(18690000)
  18690000-1=3251 × 5749
  → allows the comp. of log(5749)
  18690000+1=11 × 1699091
  log(3251)=log(3251) [log(3251) known]
  log(5749)=log(5749) [log(5749) known]
decomposition(38800000)
  38800000-1=33 × 7 × 29 × 7079
  → allows the comp. of log(7079)
  38800000+1=17 × 397 × 5749
  log(17)=log(17) [log(17) known]
  log(397)=log(397) [log(397) known]
  log(5749)=log(5749) [log(5749) known]
decomposition(3056000000)
  3056000000-1=13 × 235076923
  3056000000+1=3 × 397 × 593 × 4327
  log(593)=log(593) [log(593) known]
  log(1191)=log(3 × 397) [log(3) log(397) known]
```

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```
log(4327) (assumed to be known now)
decomposition(31560000000)
  31560000000-1=11 × 23 × 127 × 227 × 4327
  31560000000+1=37 × 103 × 8281291
  log(2497)=log(11 × 227) [log(11) log(227) known]
  log(2921)=log(23 × 127) [log(23) log(127) known]
  log(4327)=log(4327) [log(4327) known]
decomposition(4327000000)
  4327000000-1=3 × 7 × 197 × 211 × 4957
  → allows the comp. of log(4957)
  4327000000+1=43 × 2411 × 41737
  log(591)=log(3 × 197) [log(3) log(197) known]
  log(1477)=log(7 × 211) [log(7) log(211) known]
  log(4957)=log(4957) [log(4957) known]
decomposition(134300000)
  134300000-1=19 × 7068421
  134300000+1=3 × 11 × 821 × 4957
  log(83)=log(83) [log(83) known]
  log(821)=log(821) [log(821) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(4957)=\log(4957)$ [$\log(4957)$ known]

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decomposition(630000000)

$630000000-1=37 \times 17027027$

$630000000+1=73 \times 1741 \times 4957$

→ allows the comp. of $\log(1741)$

$\log(73)=\log(73)$ [$\log(73)$ known]

$\log(4957)=\log(4957)$ [$\log(4957)$ known]

$\log(1741)=\log(1741)$ [$\log(1741)$ known]

decomposition(1111000000)

$1111000000-1=3 \times 37 \times 1741 \times 5749$

$1111000000+1=41 \times 271 \times 99991$

$\log(111)=\log(3 \times 37)$ [$\log(3)$ $\log(37)$ known]

$\log(5749)=\log(5749)$ [$\log(5749)$ known]

$\log(1741)=\log(1741)$ [$\log(1741)$ known]

decomposition(13960000)

$13960000-1=3^3 \times 191 \times 2707$

→ allows the comp. of $\log(2707)$

$13960000+1=11 \times 1269091$

$\log(5157)=\log(3^3 \times 191)$ [$\log(3)$ $\log(191)$ known]

$\log(2707)=\log(2707)$ [$\log(2707)$ known]

decomposition(1963000000)

$1963000000-1=3^2 \times 197 \times 409 \times 2707$

$1963000000+1=1963000001$

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$\log(197)=\log(197)$ [$\log(197)$ known]

$\log(3681)=\log(3^2 \times 409)$ [$\log(3)$ $\log(409)$ known]

$\log(2707)=\log(2707)$ [$\log(2707)$ known]

decomposition(68100000)

$68100000-1=11 \times 2287 \times 2707$

→ allows the comp. of $\log(2287)$

$68100000+1=3167 \times 21503$

$\log(2707)=\log(2707)$ [$\log(2707)$ known]

$\log(11)=\log(11)$ [$\log(11)$ known]

$\log(2287)=\log(2287)$ [$\log(2287)$ known]

decomposition(8530000000)

$8530000000-1=3 \times 29 \times 43 \times 997 \times 2287$

$8530000000+1=8530000001$

$\log(1247)=\log(29 \times 43)$ [$\log(29)$ $\log(43)$ known]

$\log(2991)=\log(3 \times 997)$ [$\log(3)$ $\log(997)$ known]

$\log(2287)=\log(2287)$ [$\log(2287)$ known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

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```
decomposition(110000000000)
  110000000000-1=919 × 119695321
  110000000000+1=3 × 37 × 599 × 947 × 1747
  log(111)=log(3 × 37) [log(3) log(37) known]
  log(599)=log(599) [log(599) known]
  log(947)=log(947) [log(947) known]
  log(1747)=log(1747) [log(1747) known]
decomposition(407000000000)
  407000000000-1=53 × 131 × 1237 × 47389
  407000000000+1=3 × 72 × 1087 × 1453 × 1753
  log(147)=log(3 × 72) [log(3) log(7) known]
  log(1087)=log(1087) [log(1087) known]
  log(1453)=log(1453) [log(1453) known]
  log(1753)=log(1753) [log(1753) known]
decomposition(118900000000)
  118900000000-1=32 × 11 × 17 × 191 × 211 × 1753
  118900000000+1=31 × 173 × 22170427
  log(17)=log(17) [log(17) known]
  log(1899)=log(32 × 211) [log(3) log(211) known]
  log(2101)=log(11 × 191) [log(11) log(191) known]
  log(1753)=log(1753) [log(1753) known]
```

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```
decomposition(26160000000)
  26160000000-1=72 × 37 × 43 × 61 × 5501
  → allows the comp. of log(5501)
  26160000000+1=101 × 821 × 315481
  log(1813)=log(72 × 37) [log(7) log(37) known]
  log(2623)=log(43 × 61) [log(43) log(61) known]
  log(5501)=log(5501) [log(5501) known]
decomposition(305300000)
  305300000-1=19 × 23 × 127 × 5501
  305300000+1=3 × 1453 × 70039
  log(437)=log(19 × 23) [log(19) log(23) known]
  log(127)=log(127) [log(127) known]
  log(5501)=log(5501) [log(5501) known]
decomposition(1345000000)
  1345000000-1=3 × 7 × 17 × 1399 × 2693
  1345000000+1=139 × 1759 × 5501
  → allows the comp. of log(1759)
  log(139)=log(139) [log(139) known]
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\log(5501)=\log(5501)$ [log(5501) known]

$\log(1759)=\log(1759)$ [log(1759) known]

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decomposition(113700000)

$113700000-1=7 \times 53 \times 137 \times 2237$

→ allows the comp. of $\log(2237)$

$113700000+1=37 \times 1747 \times 1759$

$\log(37)=\log(37)$ [log(37) known]

$\log(1747)=\log(1747)$ [log(1747) known]

$\log(1759)=\log(1759)$ [log(1759) known]

decomposition(12020000000)

$12020000000-1=7 \times 151 \times 11371807$

$12020000000+1=3 \times 19 \times 101 \times 1171 \times 1783$

$\log(5757)=\log(3 \times 19 \times 101)$ [log(3) log(19) log(101) known]

$\log(1171)=\log(1171)$ [log(1171) known]

$\log(1783)$ (assumed to be known now)

decomposition(461000000)

$461000000-1=17 \times 67 \times 227 \times 1783$

$461000000+1=3 \times 7 \times 11 \times 179 \times 11149$

$\log(1139)=\log(17 \times 67)$ [log(17) log(67) known]

$\log(227)=\log(227)$ [log(227) known]

$\log(1783)=\log(1783)$ [log(1783) known]

decomposition(14090000000)

$14090000000-1=31 \times 233 \times 379 \times 5147$

→ allows the comp. of $\log(5147)$

$14090000000+1=3 \times 7 \times 11^2 \times 29 \times 107 \times 1787$

→ allows the comp. of $\log(1787)$

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$\log(8239)=\log(7 \times 11 \times 107)$ [log(7) log(11) log(107) known]

$\log(957)=\log(3 \times 11 \times 29)$ [log(3) log(11) log(29) known]

$\log(1787)=\log(1787)$ [log(1787) known]

decomposition(1581000000)

$1581000000-1=1580999999$

$1581000000+1=7 \times 211 \times 599 \times 1787$

$\log(1477)=\log(7 \times 211)$ [log(7) log(211) known]

$\log(599)=\log(599)$ [log(599) known]

$\log(1787)=\log(1787)$ [log(1787) known]

decomposition(98200000)

$98200000-1=3^3 \times 19 \times 107 \times 1789$

$98200000+1=98200001$

$\log(513)=\log(3^3 \times 19)$ [log(3) log(19) known]

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

```
log(107)=log(107) [log(107) known]
log(1789)=log(1789) [log(1789) known]
decomposition(80700000)
  80700000-1=5009 × 16111
  80700000+1=79 × 571 × 1789
```

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```
log(79)=log(79) [log(79) known]
log(571)=log(571) [log(571) known]
log(1789)=log(1789) [log(1789) known]
decomposition(1372000000)
  1372000000-1=3 × 197 × 1289 × 1801
  1372000000+1=499 × 2749499
log(591)=log(3 × 197) [log(3) log(197) known]
log(1289)=log(1289) [log(1289) known]
log(1801)=log(1801) [log(1801) known]
decomposition(7890000000)
  7890000000-1=7 × 17 × 31 × 1181 × 1811
  7890000000+1=13 × 1049 × 578573
log(1181)=log(1181) [log(1181) known]
log(3689)=log(7 × 17 × 31) [log(7) log(17) log(31) known]
log(1811) (assumed to be known now)
decomposition(5960000)
  5960000-1=1669 × 3571
  → allows the comp. of log(3571)
  5960000+1=3 × 1097 × 1811
```

page 214:

```
log(3291)=log(3 × 1097) [log(3) log(1097) known]
log(1811)=log(1811) [log(1811) known]
decomposition(507000000)
  507000000-1=11 × 131 × 193 × 1823
  507000000+1=507000001
log(11)=log(11) [log(11) known]
log(131)=log(131) [log(131) known]
log(139)=log(139) [log(139) known]
log(1823)=log(1823) [log(1823) known]
decomposition(54800000)
  54800000-1=1732 × 1831
  54800000+1=32 × 71 × 191 × 449
log(29929)=log(1732) [log(173) known]
log(1831)=log(1831) [log(1831) known]
decomposition(11420000)
```

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

11420000-1=11419999
11420000+1=3³ × 229 × 1847
→ allows the comp. of log(1847)

page 215:

log(6183)=log(3³ × 229) [log(3) log(229) known]
log(1847)=log(1847) [log(1847) known]

decomposition(7050000)

7050000-1=11 × 347 × 1847
7050000+1=7 × 191 × 5273
→ allows the comp. of log(5273)

log(3817)=log(11 × 347) [log(11) log(347) known]
log(1847)=log(1847) [log(1847) known]

decomposition(71200000)

71200000-1=3³ × 13 × 109 × 1861
→ allows the comp. of log(1861)
71200000+1=71200001

log(27)=log(3³) [log(3) known]
log(13)=log(13) [log(13) known]
log(109)=log(109) [log(109) known]
log(1861)=log(1861) [log(1861) known]

decomposition(15370000)

15370000-1=3 × 1861 × 2753
15370000+1=67 × 229403
log(3)=log(3) [log(3) known]
log(2753)=log(2753) [log(2753) known]
log(1861)=log(1861) [log(1861) known]

page 216:

decomposition(68700000)

68700000-1=31 × 1187 × 1867
→ allows the comp. of log(1867)
68700000+1=68700001

log(31)=log(31) [log(31) known]
log(1187)=log(1187) [log(1187) known]
log(1867)=log(1867) [log(1867) known]

decomposition(12690000)

12690000-1=7 × 971 × 1867
12690000+1=37 × 67 × 5119
→ allows the comp. of log(5119)

log(6797)=log(7 × 971) [log(7) log(971) known]
log(1867)=log(1867) [log(1867) known]

decomposition(412000000)

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$4120000000-1=3 \times 71 \times 19342723$
 $4120000000+1=13 \times 113 \times 1499 \times 1871$
 $\log(1469)=\log(13 \times 113)$ [$\log(13)$ $\log(113)$ known]
 $\log(1499)=\log(1499)$ [$\log(1499)$ known]
 $\log(1871)$ (assumed to be known now)
decomposition(183300000)
 $183300000-1=313^2 \times 1871$
 $183300000+1=17 \times 1091 \times 9883$
→ allows the comp. of $\log(9883)$

page 217:

$\log(97969)=\log(313^2)$ [$\log(313)$ known]
 $\log(1871)=\log(1871)$ [$\log(1871)$ known]
decomposition(813000000)
 $813000000-1=7 \times 59 \times 1051 \times 1873$
→ allows the comp. of $\log(1873)$
 $813000000+1=11 \times 37 \times 1997543$
 $\log(413)=\log(7 \times 59)$ [$\log(7)$ $\log(59)$ known]
 $\log(1051)=\log(1051)$ [$\log(1051)$ known]
 $\log(1873)=\log(1873)$ [$\log(1873)$ known]
decomposition(123500000)
 $123500000-1=7 \times 43 \times 410299$
 $123500000+1=3 \times 31 \times 709 \times 1873$
 $\log(93)=\log(3 \times 31)$ [$\log(3)$ $\log(31)$ known]
 $\log(709)=\log(709)$ [$\log(709)$ known]
 $\log(1873)=\log(1873)$ [$\log(1873)$ known]
decomposition(445000000)
 $445000000-1=3 \times 487 \times 1621 \times 1879$
→ allows the comp. of $\log(1879)$
 $445000000+1=4450000001$
 $\log(1461)=\log(3 \times 487)$ [$\log(3)$ $\log(487)$ known]
 $\log(1621)=\log(1621)$ [$\log(1621)$ known]
 $\log(1879)=\log(1879)$ [$\log(1879)$ known]

page 218:

decomposition(1187000000)
 $1187000000-1=1186999999$
 $1187000000+1=3^4 \times 11 \times 709 \times 1879$
 $\log(891)=\log(3^4 \times 11)$ [$\log(3)$ $\log(11)$ known]
 $\log(709)=\log(709)$ [$\log(709)$ known]
 $\log(1879)=\log(1879)$ [$\log(1879)$ known]
⇒ $1873 \times 10^8 - 1 = 3^5 \times 7 \times 71 \times 821 \times 1889$
→ This equation enables the computation of $\log(1889)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\Rightarrow 1592 \times 10^8 + 1 = 3^2 \times 7 \times 31 \times 67 \times 359 \times 3389$$

→ This equation enables the computation of $\log(3389)$

$$\Rightarrow 83 \times 10^6 - 1 = 19 \times 1289 \times 3389$$

→ This equation enables the computation of $\log(3389)$

page 219:

$$\Rightarrow 1156 \times 10^6 + 1 = 13 \times 29 \times 1613 \times 1901$$

→ This equation enables the computation of $\log(1901)$

$$\Rightarrow 1025 \times 10^7 - 1 = 37 \times 43 \times 3389 \times 1901$$

→ This equation enables the computation of $\log(1901)$

$$\Rightarrow 1003 \times 10^6 - 1 = 3 \times 199 \times 881 \times 1907$$

→ This equation enables the computation of $\log(1907)$

$$\Rightarrow 1412 \times 10^5 + 1 = 3^2 \times 19 \times 433 \times 1907$$

→ This equation enables the computation of $\log(1907)$

page 220:

$$\Rightarrow 23 \times 10^6 - 1 = 11 \times 1093 \times 1913$$

→ This equation enables the computation of $\log(1913)$

$$\Rightarrow 845 \times 10^7 + 1 = 3^3 \times 41 \times 59 \times 67 \times 1931$$

→ This equation enables the computation of $\log(1931)$

$$\Rightarrow 1205 \times 10^6 - 1 = 7 \times 239 \times 373 \times 1931$$

→ This equation enables the computation of $\log(1931)$

page 221:

$$\Rightarrow 1341 \times 10^7 - 1 = 11 \times 607 \times 1039 \times 1933$$

→ This equation enables the computation of $\log(1933)$

$$\Rightarrow 1812 \times 10^6 - 1 = 19 \times 103 \times 479 \times 1933$$

→ This equation enables the computation of $\log(1933)$

$$\Rightarrow 501 \times 10^7 + 1 = 23 \times 73 \times 1531 \times 1949$$

→ This equation enables the computation of $\log(1949)$

$$\Rightarrow 1112 \times 10^6 + 1 = 3 \times 7 \times 101 \times 269 \times 1949$$

→ This equation enables the computation of $\log(1949)$

page 222:

$$\Rightarrow 1474 \times 10^5 + 1 = 7 \times 43 \times 251 \times 1951$$

→ This equation enables the computation of $\log(1951)$

$$\Rightarrow 477 \times 10^5 - 1 = 23 \times 1063 \times 1951$$

→ This equation enables the computation of $\log(1951)$

$$\Rightarrow 1954 \times 10^5 + 1 = 97 \times 1021 \times 1973$$

→ This equation enables the computation of $\log(1973)$

$$\Rightarrow 543 \times 10^6 - 1 = 31 \times 53 \times 167 \times 1979$$

→ This equation enables the computation of $\log(1979)$

page 223:

$$\Rightarrow 507 \times 10^5 + 1 = 11 \times 17 \times 137 \times 1979$$

→ This equation enables the computation of $\log(1979)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $95 \times 10^8 - 1 = 7^3 \times 53 \times 263 \times 1987$
→ This equation enables the computation of $\log(1987)$
- ⇒ $376 \times 10^5 + 1 = 127 \times 149 \times 1987$
→ This equation enables the computation of $\log(1987)$

page 224:

- ⇒ $1099 \times 10^5 - 1 = 3^2 \times 11 \times 557 \times 1993$
→ This equation enables the computation of $\log(1993)$
- ⇒ $894 \times 10^5 + 1 = 31 \times 1447 \times 1993$
→ This equation enables the computation of $\log(1993)$
- ⇒ $892 \times 10^5 - 1 = 3^2 \times 7 \times 709 \times 1997$
→ This equation enables the computation of $\log(1997)$
- ⇒ $932 \times 10^4 - 1 = 13 \times 359 \times 1997$
→ This equation enables the computation of $\log(1997)$

page 225:

- ⇒ $1199 \times 10^7 + 1 = 3 \times 7 \times 47 \times 59 \times 103 \times 1999$
→ This equation enables the computation of $\log(1999)$
- ⇒ $1959 \times 10^5 + 1 = 11 \times 59 \times 151 \times 1999$
→ This equation enables the computation of $\log(1999)$

page 241:

- ⇒ $223 \times 10^6 - 1 = 3 \times 17 \times 37 \times 59 \times 2003$
→ This equation enables the computation of $\log(2003)$
- ⇒ $178 \times 10^7 + 1 = 13 \times 197 \times 347 \times 2003$
→ This equation enables the computation of $\log(2003)$
- ⇒ $698 \times 10^6 + 1 = 3 \times 127 \times 911 \times 2011$
→ This equation enables the computation of $\log(2011)$
- ⇒ $947 \times 10^5 + 1 = 3 \times 11 \times 1427 \times 2011$
→ This equation enables the computation of $\log(2011)$

page 242:

- ⇒ $134 \times 10^7 + 1 = 3^2 \times 97 \times 761 \times 2017$
→ This equation enables the computation of $\log(2017)$
- ⇒ $719 \times 10^5 - 1 = 43 \times 829 \times 2017$
→ This equation enables the computation of $\log(2017)$
- ⇒ $506 \times 10^5 + 1 = 3 \times 53 \times 157 \times 2027$
→ This equation enables the computation of $\log(2027)$

page 243:

- ⇒ $538 \times 10^6 + 1 = 7 \times 11^2 \times 307 \times 2069$
→ This equation enables the computation of $\log(2069)$
- ⇒ $1845 \times 10^5 + 1 = 7 \times 29 \times 433 \times 2099$
→ This equation enables the computation of $\log(2099)$

page 244:

- ⇒ $1879 \times 10^5 - 1 = 3 \times 7 \times 53 \times 79 \times 2137$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(2137)$
- ⇒ $1049 \times 10^7 + 1 = 3 \times 13 \times 313 \times 401 \times 2143$
- This equation enables the computation of $\log(2143)$
- ⇒ $1118 \times 10^5 - 1 = 179 \times 283 \times 2207$
- This equation enables the computation of $\log(2207)$
- ⇒ $1792 \times 10^5 - 1 = 3^3 \times 11 \times 269 \times 2243$
- This equation enables the computation of $\log(2243)$

page 245:

- ⇒ $1838 \times 10^5 + 1 = 3 \times 7 \times 11 \times 347 \times 2293$
- This equation enables the computation of $\log(2293)$
- ⇒ $119 \times 10^6 - 1 = 23 \times 41 \times 53 \times 2381$
- This equation enables the computation of $\log(2381)$
- ⇒ $902 \times 10^5 + 1 = 3 \times 83 \times 151 \times 2399$
- This equation enables the computation of $\log(2399)$

page 246:

- ⇒ $825 \times 10^6 + 1 = 7 \times 127 \times 383 \times 2423$
- This equation enables the computation of $\log(2423)$
- ⇒ $409 \times 10^8 + 1 = 7 \times 17 \times 19 \times 59 \times 79 \times 3881$
- This equation enables the computation of $\log(3881)$
- ⇒ $209 \times 10^7 + 1 = 3 \times 73 \times 3881 \times 2459$
- This equation enables the computation of $\log(2459)$
- ⇒ $1115 \times 10^7 + 1 = 3^4 \times 7 \times 17 \times 467 \times 2477$
- This equation enables the computation of $\log(2477)$
- ⇒ $1084 \times 10^7 + 1 = 37 \times 251 \times 463 \times 2521$
- This equation enables the computation of $\log(2521)$

page 247:

- ⇒ $1965 \times 10^6 + 1 = 571 \times 1307 \times 2633$
- This equation enables the computation of $\log(2633)$
- ⇒ $2025 \times 10^6 - 1 = 11 \times 17 \times 4091 \times 2647$
- This equation enables the computation of $\log(2647)$
- ⇒ $1345 \times 10^6 - 1 = 3 \times 7 \times 17 \times 1399 \times 2693$
- This equation enables the computation of $\log(2693)$
- ⇒ $483 \times 10^7 - 1 = 11 \times 17 \times 71 \times 131 \times 2777$
- This equation enables the computation of $\log(2777)$

page 248:

- ⇒ $199 \times 10^6 + 1 = 29 \times 43 \times 53 \times 3011$
- This equation enables the computation of $\log(3011)$
- ⇒ $5032 \times 10^7 - 1 = 3^2 \times 541 \times 1109 \times 9319$
- This equation enables the computation of $\log(9319)$
- ⇒ $26 \times 10^5 + 1 = 3^2 \times 31 \times 9319$
- This equation enables the computation of $\log(9319)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\Rightarrow 33 \times 10^7 - 1 = 7 \times 19 \times 809 \times 3067$
 \rightarrow This equation enables the computation of $\log(3067)$

page 249:

$\Rightarrow 831 \times 10^7 - 1 = 7 \times 19 \times 113 \times 179 \times 3089$
 \rightarrow This equation enables the computation of $\log(3089)$
 $\Rightarrow 59 \times 10^4 - 1 = 191 \times 3089$
 \rightarrow This equation enables the computation of $\log(3089)$
 $\Rightarrow 1919 \times 10^6 + 1 = 3 \times 17 \times 43 \times 269 \times 3253$
 \rightarrow This equation enables the computation of $\log(3253)$

page 250:

$\Rightarrow 221 \times 10^5 + 1 = 3 \times 7 \times 11 \times 29 \times 3299$
 \rightarrow This equation enables the computation of $\log(3299)$
 $\Rightarrow 1283 \times 10^7 + 1 = 3 \times 7 \times 13 \times 23 \times 619 \times 3301$
 \rightarrow This equation enables the computation of $\log(3301)$
 $\Rightarrow 31 \times 10^5 - 1 = 3 \times 7 \times 43 \times 3433$
 \rightarrow This equation enables the computation of $\log(3433)$
 $\Rightarrow 2274 \times 10^4 + 1 = 67 \times 97 \times 3499$
 \rightarrow This equation enables the computation of $\log(3499)$

page 251:

$\Rightarrow 3 \times 10^6 + 1 = 853 \times 3517$
 \rightarrow This equation enables the computation of $\log(3517)$
 $\Rightarrow 1727 \times 10^7 + 1 = 3^2 \times 17 \times 43 \times 743 \times 3533$
 \rightarrow This equation enables the computation of $\log(3533)$
 $\Rightarrow 447 \times 10^7 - 1 = 29 \times 151 \times 283 \times 3607$
 \rightarrow This equation enables the computation of $\log(3607)$
 $\Rightarrow 2045 \times 10^6 + 1 = 3 \times 11 \times 19 \times 877 \times 3719$
 \rightarrow This equation enables the computation of $\log(3719)$
 $\Rightarrow 2067 \times 10^7 - 1 = 11 \times 61 \times 89^2 \times 3889$
 \rightarrow This equation enables the computation of $\log(3889)$

page 252:

$\Rightarrow 169 \times 10^4 + 1 = 809 \times 2089$
 \rightarrow This equation enables the computation of $\log(2089)$
 $\Rightarrow 437 \times 10^6 - 1 = 53 \times 2089 \times 3947$
 \rightarrow This equation enables the computation of $\log(3947)$
 $\Rightarrow 3563 \times 10^7 + 1 = 3^2 \times 17 \times 37 \times 1531 \times 4111$
 \rightarrow This equation enables the computation of $\log(4111)$
 $\Rightarrow 1418 \times 10^8 - 1 = 7^2 \times 419 \times 1583 \times 4363$
 \rightarrow This equation enables the computation of $\log(4363)$

page 253:

$\Rightarrow 717 \times 10^7 - 1 = 19 \times 101 \times 881 \times 4241$
 \rightarrow This equation enables the computation of $\log(4241)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $1523 \times 10^5 - 1 = 257 \times 269 \times 2203$
→ This equation enables the computation of $\log(2203)$
- ⇒ $2135 \times 10^6 - 1 = 11 \times 19 \times 2203 \times 4637$
→ This equation enables the computation of $\log(4637)$
- ⇒ $2606 \times 10^6 + 1 = 3 \times 11 \times 29 \times 587 \times 4639$
→ This equation enables the computation of $\log(4639)$

page 254:

- ⇒ $4639 \times 10^6 + 1 = 17 \times 79 \times 743 \times 4649$
→ This equation enables the computation of $\log(4649)$
- ⇒ $2215 \times 10^5 - 1 = 3^2 \times 7 \times 29 \times 41 \times 2957$
→ This equation enables the computation of $\log(2957)$
- ⇒ $3127 \times 10^7 - 1 = 3 \times 7 \times 103 \times 2957 \times 4889$
→ This equation enables the computation of $\log(4889)$
- ⇒ $3617 \times 10^6 - 1 = 19 \times 53 \times 953 \times 3769$
→ This equation enables the computation of $\log(3769)$
- ⇒ $2108 \times 10^6 - 1 = 7 \times 149 \times 631 \times 3203$
→ This equation enables the computation of $\log(3203)$

page 255:

- ⇒ $7538 \times 10^8 + 1 = 3 \times 37 \times 251 \times 3203 \times 8447$
→ This equation enables the computation of $\log(8447)$
- ⇒ $643 \times 10^7 - 1 = 3 \times 89 \times 8447 \times 2851$
→ This equation enables the computation of $\log(2851)$
- ⇒ $4974 \times 10^6 + 1 = 349 \times 2851 \times 4999$
→ This equation enables the computation of $\log(4999)$
- ⇒ $1044 \times 10^5 - 1 = 11 \times 1783 \times 5323$
→ This equation enables the computation of $\log(5323)$

page 256:

- ⇒ $1 \times 10^{12} - 1 = 3^3 \times 7 \times 11 \times 13 \times 37 \times 101 \times 9901$
→ This equation enables the computation of $\log(9901)$
- ⇒ $4762 \times 10^5 - 1 = 3^3 \times 11 \times 167 \times 9601$
→ This equation enables the computation of $\log(9601)$
- ⇒ $1974 \times 10^6 - 1 = 17 \times 53 \times 233 \times 9403$
→ This equation enables the computation of $\log(9403)$
- ⇒ $2516 \times 10^8 + 1 = 3 \times 7 \times 29 \times 97 \times 463 \times 9199$
→ This equation enables the computation of $\log(9199)$

page 257:

- ⇒ $1711 \times 10^8 - 1 = 3^4 \times 331 \times 709 \times 9001$
→ This equation enables the computation of $\log(9001)$
- ⇒ $465 \times 10^7 - 1 = 23 \times 89 \times 647 \times 3511$
→ This equation enables the computation of $\log(3511)$
- ⇒ $1709 \times 10^8 + 1 = 3^2 \times 601 \times 3511 \times 8999$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(8999)$
- ⇒ $1783 \times 10^6 + 1 = 17 \times 59 \times 199 \times 8933$
- This equation enables the computation of $\log(8933)$
- ⇒ $3545 \times 10^6 - 1 = 401 \times 997 \times 8867$
- This equation enables the computation of $\log(8867)$

page 258:

- ⇒ $6767 \times 10^7 + 1 = 3^2 \times 257 \times 3607 \times 8111$
- This equation enables the computation of $\log(8111)$
- ⇒ $3177 \times 10^6 + 1 = 7 \times 17 \times 31 \times 109 \times 7901$
- This equation enables the computation of $\log(7901)$
- ⇒ $2877 \times 10^7 - 1 = 13 \times 331 \times 797 \times 8389$
- This equation enables the computation of $\log(8389)$
- ⇒ $5512 \times 10^7 + 1 = 11 \times 79 \times 8389 \times 7561$
- This equation enables the computation of $\log(7561)$

page 259:

- ⇒ $2116 \times 10^8 - 1 = 3^6 \times 61 \times 631 \times 7541$
- This equation enables the computation of $\log(7541)$
- ⇒ $2432 \times 10^7 + 1 = 3 \times 11 \times 127 \times 773 \times 7507$
- This equation enables the computation of $\log(7507)$
- ⇒ $1334 \times 10^6 - 1 = 127 \times 3253 \times 3229$
- This equation enables the computation of $\log(3229)$
- ⇒ $1895 \times 10^6 + 1 = 3 \times 53 \times 3229 \times 3691$
- This equation enables the computation of $\log(3691)$
- ⇒ $4265 \times 10^9 + 1 = 3^3 \times 13 \times 439 \times 3691 \times 7499$
- This equation enables the computation of $\log(7499)$

page 260:

- ⇒ $5594 \times 10^7 - 1 = 13 \times 23 \times 31 \times 821 \times 7351$
- This equation enables the computation of $\log(7351)$
- ⇒ $2091 \times 10^7 - 1 = 7 \times 31 \times 47 \times 733 \times 2797$
- This equation enables the computation of $\log(2797)$
- ⇒ $4018 \times 10^9 + 1 = 13^3 \times 461 \times 541 \times 7333$
- This equation enables the computation of $\log(7333)$
- ⇒ $3947 \times 10^6 + 1 = 3 \times 7 \times 131 \times 197 \times 7283$
- This equation enables the computation of $\log(7283)$
- ⇒ $1632 \times 10^5 + 1 = 163 \times 337 \times 2971$
- This equation enables the computation of $\log(2971)$

page 261:

- ⇒ $254 \times 10^7 + 1 = 3 \times 7 \times 11 \times 2971 \times 3701$
- This equation enables the computation of $\log(3701)$
- ⇒ $3194 \times 10^5 + 1 = 3^2 \times 43 \times 223 \times 3701$
- This equation enables the computation of $\log(3701)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $5975 \times 10^5 + 1 = 3^2 \times 7 \times 1571 \times 6037$
→ This equation enables the computation of $\log(6037)$
- ⇒ $877 \times 10^7 - 1 = 3 \times 37 \times 41 \times 701 \times 2749$
→ This equation enables the computation of $\log(2749)$

page 262:

- ⇒ $3272 \times 10^6 - 1 = 211 \times 2749 \times 5641$
→ This equation enables the computation of $\log(5641)$
- ⇒ $305 \times 10^6 + 1 = 3^2 \times 53 \times 269 \times 2377$
→ This equation enables the computation of $\log(2377)$
- ⇒ $3596 \times 10^7 + 1 = 3 \times 19 \times 47 \times 2377 \times 5647$
→ This equation enables the computation of $\log(5647)$
- ⇒ $4773 \times 10^6 - 1 = 727 \times 859 \times 7643$
→ This equation enables the computation of $\log(7643)$

page 263:

- ⇒ $287 \times 10^7 + 1 = 3^2 \times 11 \times 7643 \times 3793$
→ This equation enables the computation of $\log(3793)$
- ⇒ $3385 \times 10^8 - 1 = 3^3 \times 7 \times 83 \times 3793 \times 5689$
→ This equation enables the computation of $\log(5689)$
- ⇒ $799 \times 10^5 - 1 = 3 \times 23 \times 449 \times 2579$
→ This equation enables the computation of $\log(2579)$
- ⇒ $89 \times 10^7 - 1 = 7 \times 107 \times 571 \times 2081$
→ This equation enables the computation of $\log(2081)$

page 264:

- ⇒ $2081 \times 10^7 + 1 = 3 \times 7 \times 61 \times 2579 \times 6299$
→ This equation enables the computation of $\log(6299)$
- ⇒ $8488 \times 10^8 - 1 = 3^3 \times 7 \times 421 \times 1109 \times 9619$
→ This equation enables the computation of $\log(9619)$
- ⇒ $1691 \times 10^7 + 1 = 3^2 \times 31 \times 9619 \times 6301$
→ This equation enables the computation of $\log(6301)$
- ⇒ $4276 \times 10^6 - 1 = 3^2 \times 173 \times 331 \times 8297$
→ This equation enables the computation of $\log(8297)$
- ⇒ $621 \times 10^8 + 1 = 13 \times 89 \times 8297 \times 6469$
→ This equation enables the computation of $\log(6469)$

page 265:

- ⇒ $1519 \times 10^8 - 1 = 3 \times 11 \times 653 \times 937 \times 7523$
→ This equation enables the computation of $\log(7523)$
- ⇒ $6083 \times 10^6 + 1 = 3^2 \times 13 \times 7523 \times 6911$
→ This equation enables the computation of $\log(6911)$
- ⇒ $3032 \times 10^6 + 1 = 3^2 \times 23^2 \times 163 \times 3907$
→ This equation enables the computation of $\log(3907)$
- ⇒ $888 \times 10^6 - 1 = 47 \times 1997 \times 9461$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(9461)$
- ⇒ $1981 \times 10^7 - 1 = 3^2 \times 73 \times 9461 \times 3187$
- This equation enables the computation of $\log(3187)$

page 266:

- ⇒ $8873 \times 10^6 + 1 = 3^2 \times 71 \times 3187 \times 4357$
- This equation enables the computation of $\log(4357)$
- ⇒ $1718 \times 10^6 + 1 = 3^2 \times 101 \times 409 \times 4621$
- This equation enables the computation of $\log(4621)$
- ⇒ $3907 \times 10^6 + 1 = 19 \times 59 \times 797 \times 4373$
- This equation enables the computation of $\log(4373)$
- ⇒ $5201 \times 10^7 + 1 = 3^2 \times 211 \times 4373 \times 6263$
- This equation enables the computation of $\log(6263)$

page 267:

- ⇒ $4357 \times 10^6 - 1 = 3^2 \times 11 \times 6263 \times 7027$
- This equation enables the computation of $\log(7027)$
- ⇒ $676 \times 10^8 - 1 = 3^2 \times 7 \times 37 \times 7027 \times 4127$
- This equation enables the computation of $\log(4127)$
- ⇒ $2559 \times 10^6 + 1 = 89 \times 4127 \times 6967$
- This equation enables the computation of $\log(6967)$
- ⇒ $4621 \times 10^7 - 1 = 3 \times 311 \times 6967 \times 7109$
- This equation enables the computation of $\log(7109)$

page 268:

- ⇒ $1369 \times 10^5 - 1 = 3^2 \times 31 \times 71 \times 6911$
- This equation enables the computation of $\log(6911)$
- ⇒ $6877 \times 10^5 - 1 = 3^2 \times 7 \times 1451 \times 7523$
- This equation enables the computation of $\log(7523)$
- ⇒ $222 \times 10^4 + 1 = 7 \times 83 \times 3821$
- This equation enables the computation of $\log(3821)$
- ⇒ $69 \times 10^7 + 1 = 89 \times 3821 \times 2029$
- This equation enables the computation of $\log(2029)$

page 269:

- ⇒ $45 \times 10^6 + 1 = 41 \times 347 \times 3163$
- This equation enables the computation of $\log(3163)$
- ⇒ $1586 \times 10^7 + 1 = 3 \times 251 \times 3163 \times 6659$
- This equation enables the computation of $\log(6659)$
- ⇒ $1216 \times 10^5 - 1 = 3^2 \times 6659 \times 2029$
- This equation enables the computation of $\log(2029)$
- ⇒ $169 \times 10^8 - 1 = 3 \times 17 \times 71 \times 1831 \times 2549$
- This equation enables the computation of $\log(2549)$

page 270:

- ⇒ $1606 \times 10^6 - 1 = 3 \times 103 \times 2549 \times 2039$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(2039)$
- ⇒ $433 \times 10^6 + 1 = 7 \times 23 \times 1319 \times 2039$
- This equation enables the computation of $\log(2039)$
- ⇒ $1154 \times 10^7 - 1 = 11 \times 19^3 \times 43 \times 3557$
- This equation enables the computation of $\log(3557)$

page 271:

- ⇒ $869 \times 10^6 - 1 = 7 \times 17 \times 3557 \times 2053$
- This equation enables the computation of $\log(2053)$
- ⇒ $887 \times 10^6 + 1 = 3 \times 37 \times 43 \times 83 \times 2239$
- This equation enables the computation of $\log(2239)$
- ⇒ $1379 \times 10^4 + 1 = 3 \times 2239 \times 2053$
- This equation enables the computation of $\log(2053)$
- ⇒ $1754 \times 10^6 + 1 = 3^5 \times 13 \times 233 \times 2383$
- This equation enables the computation of $\log(2383)$
- ⇒ $1524 \times 10^5 - 1 = 31 \times 2383 \times 2063$
- This equation enables the computation of $\log(2063)$

page 272:

- ⇒ $1498 \times 10^6 + 1 = 419 \times 1733 \times 2063$
- This equation enables the computation of $\log(2063)$
- ⇒ $1432 \times 10^5 + 1 = 7^2 \times 23 \times 61 \times 2083$
- This equation enables the computation of $\log(2083)$
- ⇒ $69 \times 10^7 - 1 = 13 \times 83 \times 307 \times 2083$
- This equation enables the computation of $\log(2083)$
- ⇒ $2674 \times 10^7 + 1 = 11 \times 13 \times 59 \times 823 \times 3851$
- This equation enables the computation of $\log(3851)$

page 273:

- ⇒ $217 \times 10^6 - 1 = 3^3 \times 3851 \times 2087$
- This equation enables the computation of $\log(2087)$
- ⇒ $187 \times 10^7 + 1 = 593 \times 1511 \times 2087$
- This equation enables the computation of $\log(2087)$
- ⇒ $558 \times 10^7 - 1 = 7^2 \times 137 \times 199 \times 4177$
- This equation enables the computation of $\log(4177)$
- ⇒ $1499 \times 10^5 - 1 = 17 \times 4177 \times 2111$
- This equation enables the computation of $\log(2111)$

page 274:

- ⇒ $612 \times 10^5 + 1 = 53 \times 547 \times 2111$
- This equation enables the computation of $\log(2111)$
- ⇒ $2366 \times 10^8 - 1 = 11 \times 1409 \times 2011 \times 7591$
- This equation enables the computation of $\log(7591)$
- ⇒ $887 \times 10^7 - 1 = 7 \times 79 \times 7591 \times 2113$
- This equation enables the computation of $\log(2113)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\Rightarrow 1226 \times 10^7 + 1 = 3 \times 31 \times 89 \times 701 \times 2113$$

→ This equation enables the computation of $\log(2113)$

page 275:

$$\Rightarrow 1149 \times 10^5 + 1 = 29 \times 1861 \times 2129$$

→ This equation enables the computation of $\log(2129)$

$$\Rightarrow 98 \times 10^6 - 1 = 191 \times 241 \times 2129$$

→ This equation enables the computation of $\log(2129)$

$$\Rightarrow 1113 \times 10^5 - 1 = 29 \times 1801 \times 2131$$

→ This equation enables the computation of $\log(2131)$

$$\Rightarrow 1603 \times 10^6 - 1 = 3^2 \times 19 \times 53 \times 83 \times 2131$$

→ This equation enables the computation of $\log(2131)$

$$\Rightarrow 14 \times 10^6 - 1 = 13 \times 503 \times 2141$$

→ This equation enables the computation of $\log(2141)$

page 276:

$$\Rightarrow 2127 \times 10^6 + 1 = 7 \times 347 \times 409 \times 2141$$

→ This equation enables the computation of $\log(2141)$

$$\Rightarrow 3936 \times 10^7 + 1 = 7 \times 1049 \times 1151 \times 4657$$

→ This equation enables the computation of $\log(4657)$

$$\Rightarrow 721 \times 10^7 - 1 = 3^3 \times 17 \times 4657 \times 3373$$

→ This equation enables the computation of $\log(3373)$

$$\Rightarrow 2106 \times 10^5 + 1 = 29 \times 3373 \times 2153$$

→ This equation enables the computation of $\log(2153)$

$$\Rightarrow 47 \times 10^5 - 1 = 37 \times 59 \times 2153$$

→ This equation enables the computation of $\log(2153)$

page 277:

$$\Rightarrow 459 \times 10^5 + 1 = 7 \times 1289 \times 5087$$

→ This equation enables the computation of $\log(5087)$

$$\Rightarrow 1572 \times 10^6 + 1 = 11 \times 13 \times 5087 \times 2161$$

→ This equation enables the computation of $\log(2161)$

$$\Rightarrow 1108 \times 10^8 - 1 = 3^2 \times 13 \times 593 \times 739 \times 2161$$

→ This equation enables the computation of $\log(2161)$

$$\Rightarrow 1842 \times 10^7 + 1 = 13 \times 757 \times 859 \times 2179$$

→ This equation enables the computation of $\log(2179)$

$$\Rightarrow 337 \times 10^7 - 1 = 3 \times 19 \times 43 \times 631 \times 2179$$

→ This equation enables the computation of $\log(2179)$

$$\Rightarrow 146 \times 10^5 - 1 = 19 \times 307 \times 2503$$

→ This equation enables the computation of $\log(2503)$

page 278:

$$\Rightarrow 956 \times 10^8 + 1 = 3 \times 11 \times 523 \times 2503 \times 2213$$

→ This equation enables the computation of $\log(2213)$

$$\Rightarrow 16 \times 10^5 - 1 = 3 \times 241 \times 2213$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(2213)$
- ⇒ $6192 \times 10^5 - 1 = 11 \times 41 \times 163 \times 8423$
- This equation enables the computation of $\log(8423)$
- ⇒ $275 \times 10^7 + 1 = 3 \times 7^2 \times 8423 \times 2221$
- This equation enables the computation of $\log(2221)$

page 279:

- ⇒ $1946 \times 10^7 - 1 = 11 \times 523 \times 1523 \times 2221$
- This equation enables the computation of $\log(2221)$
- ⇒ $11 \times 10^7 + 1 = 3 \times 37 \times 443 \times 2237$
- This equation enables the computation of $\log(2237)$
- ⇒ $1137 \times 10^5 - 1 = 7 \times 53 \times 137 \times 2237$
- This equation enables the computation of $\log(2237)$
- ⇒ $417 \times 10^6 + 1 = 11^2 \times 1531 \times 2251$
- This equation enables the computation of $\log(2251)$
- ⇒ $1834 \times 10^6 - 1 = 3 \times 13^2 \times 1607 \times 2251$
- This equation enables the computation of $\log(2251)$

page 280:

- ⇒ $2502 \times 10^5 - 1 = 7 \times 17 \times 19 \times 41 \times 2699$
- This equation enables the computation of $\log(2699)$
- ⇒ $79 \times 10^7 - 1 = 3 \times 43 \times 2699 \times 2269$
- This equation enables the computation of $\log(2269)$
- ⇒ $1479 \times 10^6 + 1 = 37 \times 79 \times 223 \times 2269$
- This equation enables the computation of $\log(2269)$
- ⇒ $1951 \times 10^6 + 1 = 23 \times 67 \times 557 \times 2273$
- This equation enables the computation of $\log(2273)$
- ⇒ $1396 \times 10^7 - 1 = 3^4 \times 11 \times 61 \times 113 \times 2273$
- This equation enables the computation of $\log(2273)$

page 281:

- ⇒ $1259 \times 10^5 - 1 = 23 \times 827 \times 6619$
- This equation enables the computation of $\log(6619)$
- ⇒ $4025 \times 10^7 + 1 = 3 \times 431 \times 6619 \times 4703$
- This equation enables the computation of $\log(4703)$
- ⇒ $3222 \times 10^5 - 1 = 11 \times 79 \times 101 \times 3671$
- This equation enables the computation of $\log(3671)$
- ⇒ $4703 \times 10^8 + 1 = 3 \times 13 \times 19 \times 23 \times 3671 \times 7517$
- This equation enables the computation of $\log(7517)$
- ⇒ $4246 \times 10^6 + 1 = 107 \times 7517 \times 5279$
- This equation enables the computation of $\log(5279)$
- ⇒ $1687 \times 10^7 - 1 = 3 \times 467 \times 5279 \times 2281$
- This equation enables the computation of $\log(2281)$

page 282:

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $594 \times 10^7 + 1 = 13^2 \times 19 \times 811 \times 2281$
→ This equation enables the computation of $\log(2281)$
- ⇒ $876 \times 10^6 - 1 = 7^2 \times 43 \times 181 \times 2297$
→ This equation enables the computation of $\log(2297)$
- ⇒ $2122 \times 10^8 - 1 = 3 \times 13 \times 47 \times 101 \times 499 \times 2297$
→ This equation enables the computation of $\log(2297)$
- ⇒ $257 \times 10^8 + 1 = 3 \times 13 \times 19 \times 71 \times 179 \times 2729$
→ This equation enables the computation of $\log(2729)$
- ⇒ $2255 \times 10^5 - 1 = 19 \times 2729 \times 4349$
→ This equation enables the computation of $\log(4349)$

page 283:

- ⇒ $24 \times 10^8 - 1 = 239 \times 4349 \times 2309$
→ This equation enables the computation of $\log(2309)$
- ⇒ $1129 \times 10^6 - 1 = 3 \times 229 \times 491 \times 3347$
→ This equation enables the computation of $\log(3347)$
- ⇒ $2218 \times 10^6 + 1 = 7 \times 41 \times 3347 \times 2309$
→ This equation enables the computation of $\log(2309)$
- ⇒ $483 \times 10^7 - 1 = 11 \times 17 \times 71 \times 131 \times 2777$
→ This equation enables the computation of $\log(2777)$
- ⇒ $1091 \times 10^5 - 1 = 17 \times 2777 \times 2311$
→ This equation enables the computation of $\log(2311)$

page 284:

- ⇒ $1666 \times 10^4 - 1 = 3^4 \times 89 \times 2311$
→ This equation enables the computation of $\log(2311)$
- ⇒ $695 \times 10^7 + 1 = 3 \times 7 \times 43 \times 3299 \times 2333$
→ This equation enables the computation of $\log(2333)$
- ⇒ $1843 \times 10^5 + 1 = 197 \times 401 \times 2333$
→ This equation enables the computation of $\log(2333)$
- ⇒ $2216 \times 10^6 + 1 = 3 \times 19 \times 31 \times 281 \times 4463$
→ This equation enables the computation of $\log(4463)$
- ⇒ $2247 \times 10^6 - 1 = 89 \times 4463 \times 5657$
→ This equation enables the computation of $\log(5657)$
- ⇒ $1663 \times 10^8 - 1 = 3 \times 7^2 \times 31 \times 5657 \times 6451$
→ This equation enables the computation of $\log(6451)$

page 285:

- ⇒ $1358 \times 10^5 + 1 = 3^2 \times 6451 \times 2339$
→ This equation enables the computation of $\log(2339)$
- ⇒ $1838 \times 10^7 + 1 = 3 \times 11 \times 227 \times 1049 \times 2339$
→ This equation enables the computation of $\log(2339)$
- ⇒ $504 \times 10^8 + 1 = 13 \times 19 \times 101 \times 863 \times 2341$
→ This equation enables the computation of $\log(2341)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $1239 \times 10^6 + 1 = 17 \times 163 \times 191 \times 2341$
→ This equation enables the computation of $\log(2341)$
- ⇒ $1991 \times 10^6 - 1 = 17 \times 139 \times 359 \times 2347$
→ This equation enables the computation of $\log(2347)$

page 286:

- ⇒ $356 \times 10^6 + 1 = 3 \times 7 \times 31 \times 233 \times 2347$
→ This equation enables the computation of $\log(2347)$
- ⇒ $929 \times 10^6 + 1 = 3 \times 107 \times 1231 \times 2351$
→ This equation enables the computation of $\log(2351)$
- ⇒ $328 \times 10^7 + 1 = 19 \times 97 \times 757 \times 2351$
→ This equation enables the computation of $\log(2351)$
- ⇒ $217 \times 10^7 - 1 = 3^2 \times 59 \times 811 \times 5039$
→ This equation enables the computation of $\log(5039)$
- ⇒ $1544 \times 10^5 - 1 = 13 \times 5039 \times 2357$
→ This equation enables the computation of $\log(2357)$

page 287:

- ⇒ $813 \times 10^5 + 1 = 17 \times 2029 \times 2357$
→ This equation enables the computation of $\log(2357)$
- ⇒ $1696 \times 10^5 + 1 = 233 \times 307 \times 2371$
→ This equation enables the computation of $\log(2371)$
- ⇒ $675 \times 10^5 - 1 = 7^3 \times 83 \times 2371$
→ This equation enables the computation of $\log(2371)$
- ⇒ $916 \times 10^6 - 1 = 3 \times 149 \times 587 \times 3491$
→ This equation enables the computation of $\log(3491)$
- ⇒ $834 \times 10^4 - 1 = 3491 \times 2389$
→ This equation enables the computation of $\log(2389)$

page 288:

- ⇒ $1555 \times 10^4 + 1 = 23 \times 283 \times 2389$
→ This equation enables the computation of $\log(2389)$
- ⇒ $3744 \times 10^4 + 1 = 17 \times 523 \times 4211$
→ This equation enables the computation of $\log(4211)$
- ⇒ $131 \times 10^6 - 1 = 13 \times 4211 \times 2393$
→ This equation enables the computation of $\log(2393)$
- ⇒ $2262 \times 10^6 + 1 = 397 \times 2381 \times 2393$
→ This equation enables the computation of $\log(2393)$
- ⇒ $5191 \times 10^4 + 1 = 11 \times 13 \times 37 \times 9811$
→ This equation enables the computation of $\log(9811)$

page 289:

- ⇒ $1916 \times 10^6 + 1 = 3^4 \times 9811 \times 2411$
→ This equation enables the computation of $\log(2411)$
- ⇒ $495 \times 10^6 - 1 = 13 \times 17 \times 929 \times 2411$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(2411)$
- ⇒ $2006 \times 10^5 - 1 = 157 \times 281 \times 4547$
- This equation enables the computation of $\log(4547)$
- ⇒ $111 \times 10^7 - 1 = 101 \times 4547 \times 2417$
- This equation enables the computation of $\log(2417)$
- ⇒ $1307 \times 10^6 + 1 = 3 \times 17 \times 23 \times 461 \times 2417$
- This equation enables the computation of $\log(2417)$

page 290:

- ⇒ $3193 \times 10^6 + 1 = 23 \times 71 \times 587 \times 3331$
- This equation enables the computation of $\log(3331)$
- ⇒ $138 \times 10^6 - 1 = 17 \times 3331 \times 2437$
- This equation enables the computation of $\log(2437)$
- ⇒ $1615 \times 10^4 - 1 = 3 \times 47^2 \times 2437$
- This equation enables the computation of $\log(2437)$
- ⇒ $2319 \times 10^5 - 1 = 131 \times 359 \times 4931$
- This equation enables the computation of $\log(4931)$
- ⇒ $4931 \times 10^8 + 1 = 3^5 \times 7 \times 17 \times 19 \times 137 \times 6551$
- This equation enables the computation of $\log(6551)$
- ⇒ $1775 \times 10^6 + 1 = 3 \times 37 \times 6551 \times 2441$
- This equation enables the computation of $\log(2441)$

page 291:

- ⇒ $1778 \times 10^5 - 1 = 13^2 \times 431 \times 2441$
- This equation enables the computation of $\log(2441)$
- ⇒ $1891 \times 10^6 + 1 = 11 \times 163 \times 431 \times 2447$
- This equation enables the computation of $\log(2447)$
- ⇒ $556 \times 10^6 - 1 = 3 \times 23 \times 37 \times 89 \times 2447$
- This equation enables the computation of $\log(2447)$
- ⇒ $1351 \times 10^4 - 1 = 3^2 \times 607 \times 2473$
- This equation enables the computation of $\log(2473)$
- ⇒ $26 \times 10^{10} - 1 = 17 \times 37 \times 59 \times 2473 \times 2833$
- This equation enables the computation of $\log(2833)$

page 292:

- ⇒ $636 \times 10^6 + 1 = 7 \times 13 \times 2833 \times 2467$
- This equation enables the computation of $\log(2467)$
- ⇒ $1831 \times 10^6 - 1 = 3 \times 19 \times 29 \times 449 \times 2467$
- This equation enables the computation of $\log(2467)$
- ⇒ $7795 \times 10^7 - 1 = 3^5 \times 31 \times 1223 \times 8461$
- This equation enables the computation of $\log(8461)$
- ⇒ $666 \times 10^7 + 1 = 311 \times 8461 \times 2531$
- This equation enables the computation of $\log(2531)$
- ⇒ $933 \times 10^6 - 1 = 449 \times 821 \times 2531$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(2531)$

page 293:

$$\Rightarrow 3928 \times 10^6 - 1 = 3 \times 7 \times 11 \times 3533 \times 4813$$

→ This equation enables the computation of $\log(4813)$

$$\Rightarrow 4037 \times 10^5 + 1 = 3 \times 73 \times 383 \times 4813$$

→ This equation enables the computation of $\log(4813)$

$$\Rightarrow 1995 \times 10^6 + 1 = 311 \times 1999 \times 3209$$

→ This equation enables the computation of $\log(3209)$

$$\Rightarrow 1214 \times 10^6 - 1 = 149 \times 3209 \times 2539$$

→ This equation enables the computation of $\log(2539)$

$$\Rightarrow 1984 \times 10^5 - 1 = 3 \times 7 \times 61^2 \times 2539$$

→ This equation enables the computation of $\log(2539)$

page 294:

$$\Rightarrow 7185 \times 10^7 + 1 = 13^2 \times 71 \times 661 \times 9059$$

→ This equation enables the computation of $\log(9059)$

$$\Rightarrow 622 \times 10^6 - 1 = 3^3 \times 9059 \times 2543$$

→ This equation enables the computation of $\log(2543)$

$$\Rightarrow 1921 \times 10^6 + 1 = 547 \times 1381 \times 2543$$

→ This equation enables the computation of $\log(2543)$

$$\Rightarrow 1367 \times 10^8 + 1 = 3^4 \times 769 \times 863 \times 2543$$

→ This equation enables the computation of $\log(2543)$

$$\Rightarrow 2232 \times 10^6 + 1 = 7 \times 11^2 \times 1033 \times 2551$$

→ This equation enables the computation of $\log(2551)$

$$\Rightarrow 319 \times 10^6 - 1 = 3 \times 73 \times 571 \times 2551$$

→ This equation enables the computation of $\log(2551)$

page 295:

$$\Rightarrow 12 \times 10^6 + 1 = 13 \times 19^2 \times 2557$$

→ This equation enables the computation of $\log(2557)$

$$\Rightarrow 1357 \times 10^4 - 1 = 3 \times 29 \times 61 \times 2557$$

→ This equation enables the computation of $\log(2557)$

$$\Rightarrow 946 \times 10^5 + 1 = 29 \times 1259 \times 2591$$

→ This equation enables the computation of $\log(2591)$

$$\Rightarrow 904 \times 10^4 - 1 = 3 \times 1163 \times 2591$$

→ This equation enables the computation of $\log(2591)$

page 296:

$$\Rightarrow 3521 \times 10^5 + 1 = 3 \times 11 \times 19 \times 137 \times 4099$$

→ This equation enables the computation of $\log(4099)$

$$\Rightarrow 896 \times 10^7 + 1 = 3 \times 281 \times 4099 \times 2593$$

→ This equation enables the computation of $\log(2593)$

$$\Rightarrow 1181 \times 10^6 + 1 = 3 \times 157 \times 967 \times 2593$$

→ This equation enables the computation of $\log(2593)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- $\Rightarrow 1426 \times 10^7 - 1 = 3 \times 7 \times 251 \times 373 \times 7253$
→ This equation enables the computation of $\log(7253)$
- $\Rightarrow 246 \times 10^6 + 1 = 13 \times 7253 \times 2609$
→ This equation enables the computation of $\log(2609)$

page 297:

- $\Rightarrow 2363 \times 10^6 - 1 = 19 \times 73 \times 653 \times 2609$
→ This equation enables the computation of $\log(2609)$
- $\Rightarrow 5735 \times 10^6 + 1 = 3 \times 367 \times 907 \times 5743$
→ This equation enables the computation of $\log(5743)$
- $\Rightarrow 2298 \times 10^7 - 1 = 11 \times 139 \times 5743 \times 2617$
→ This equation enables the computation of $\log(2617)$
- $\Rightarrow 573 \times 10^6 + 1 = 7 \times 31 \times 1009 \times 2617$
→ This equation enables the computation of $\log(2617)$
- $\Rightarrow 2458 \times 10^5 + 1 = 191 \times 491 \times 2621$
→ This equation enables the computation of $\log(2621)$
- $\Rightarrow 163 \times 10^5 - 1 = 3^2 \times 691 \times 2621$
→ This equation enables the computation of $\log(2621)$

page 298:

- $\Rightarrow 1634 \times 10^7 + 1 = 3 \times 13 \times 137 \times 1151 \times 2657$
→ This equation enables the computation of $\log(2657)$
- $\Rightarrow 398 \times 10^6 + 1 = 3 \times 7^2 \times 1019 \times 2657$
→ This equation enables the computation of $\log(2657)$
- $\Rightarrow 795 \times 10^7 - 1 = 29 \times 41 \times 1429 \times 4679$
→ This equation enables the computation of $\log(4679)$
- $\Rightarrow 1408 \times 10^6 + 1 = 113 \times 4679 \times 2663$
→ This equation enables the computation of $\log(2663)$
- $\Rightarrow 1206 \times 10^7 + 1 = 7^2 \times 29 \times 3187 \times 2663$
→ This equation enables the computation of $\log(2663)$

page 299:

- $\Rightarrow 357 \times 10^6 - 1 = 31 \times 61 \times 71 \times 2659$
→ This equation enables the computation of $\log(2659)$
- $\Rightarrow 1748 \times 10^5 + 1 = 3 \times 17 \times 1289 \times 2659$
→ This equation enables the computation of $\log(2659)$
- $\Rightarrow 1955 \times 10^6 + 1 = 3 \times 137 \times 1697 \times 2803$
→ This equation enables the computation of $\log(2803)$
- $\Rightarrow 44 \times 10^9 + 1 = 3^2 \times 653 \times 2803 \times 2671$
→ This equation enables the computation of $\log(2671)$
- $\Rightarrow 1407 \times 10^6 - 1 = 23 \times 37 \times 619 \times 2671$
→ This equation enables the computation of $\log(2671)$

page 300:

- $\Rightarrow 181 \times 10^6 + 1 = 7 \times 13 \times 743 \times 2677$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(2677)$
- ⇒ $2531 \times 10^6 + 1 = 3 \times 17 \times 53 \times 349 \times 2683$
- This equation enables the computation of $\log(2683)$
- ⇒ $152 \times 10^6 - 1 = 181 \times 313 \times 2683$
- This equation enables the computation of $\log(2683)$
- ⇒ $2432 \times 10^9 + 1 = 3 \times 11 \times 13 \times 683 \times 3089 \times 2687$
- This equation enables the computation of $\log(2687)$
- ⇒ $137 \times 10^8 + 1 = 3 \times 17 \times 257 \times 389 \times 2687$
- This equation enables the computation of $\log(2687)$

page 301:

- ⇒ $2573 \times 10^9 - 1 = 11 \times 13^3 \times 29 \times 887 \times 4139$
- This equation enables the computation of $\log(4139)$
- ⇒ $1458 \times 10^6 + 1 = 131 \times 4139 \times 2689$
- This equation enables the computation of $\log(2689)$
- ⇒ $2095 \times 10^4 - 1 = 3 \times 7^2 \times 53 \times 2689$
- This equation enables the computation of $\log(2689)$
- ⇒ $23 \times 10^7 + 1 = 3 \times 7 \times 11 \times 367 \times 2713$
- This equation enables the computation of $\log(2713)$
- ⇒ $413 \times 10^5 - 1 = 13 \times 1171 \times 2713$
- This equation enables the computation of $\log(2713)$

page 302:

- ⇒ $22 \times 10^8 - 1 = 3 \times 173 \times 1559 \times 2719$
- This equation enables the computation of $\log(2719)$
- ⇒ $248 \times 10^5 - 1 = 7 \times 1303 \times 2719$
- This equation enables the computation of $\log(2719)$
- ⇒ $234 \times 10^7 - 1 = 877 \times 977 \times 2731$
- This equation enables the computation of $\log(2731)$
- ⇒ $391 \times 10^6 + 1 = 7 \times 113 \times 181 \times 2731$
- This equation enables the computation of $\log(2731)$
- ⇒ $2629 \times 10^6 - 1 = 3^2 \times 19 \times 71 \times 79 \times 2741$
- This equation enables the computation of $\log(2741)$

page 303:

- ⇒ $112 \times 10^6 + 1 = 29 \times 1409 \times 2741$
- This equation enables the computation of $\log(2741)$
- ⇒ $5792 \times 10^5 + 1 = 3 \times 31 \times 1033 \times 6029$
- This equation enables the computation of $\log(6029)$
- ⇒ $1785 \times 10^6 + 1 = 107 \times 6029 \times 2767$
- This equation enables the computation of $\log(2767)$
- ⇒ $982 \times 10^6 - 1 = 3^2 \times 47 \times 839 \times 2767$
- This equation enables the computation of $\log(2767)$
- ⇒ $241 \times 10^7 + 1 = 743 \times 1163 \times 2789$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(2789)$

page 304:

$$\Rightarrow 379 \times 10^6 - 1 = 3^3 \times 7 \times 719 \times 2789$$

→ This equation enables the computation of $\log(2789)$

$$\Rightarrow 142 \times 10^9 - 1 = 3 \times 11^2 \times 13 \times 53 \times 59 \times 9623$$

→ This equation enables the computation of $\log(9623)$

$$\Rightarrow 2345 \times 10^6 + 1 = 3 \times 29 \times 9623 \times 2801$$

→ This equation enables the computation of $\log(2801)$

$$\Rightarrow 456 \times 10^6 - 1 = 7 \times 13 \times 1789 \times 2801$$

→ This equation enables the computation of $\log(2801)$

$$\Rightarrow 1839 \times 10^7 - 1 = 7 \times 29 \times 37 \times 811 \times 3019$$

→ This equation enables the computation of $\log(3019)$

page 305:

$$\Rightarrow 2743 \times 10^6 + 1 = 7 \times 31 \times 53 \times 79 \times 3019$$

→ This equation enables the computation of $\log(3019)$

$$\Rightarrow 1652 \times 10^9 + 1 = 3 \times 13^2 \times 151 \times 2621 \times 8233$$

→ This equation enables the computation of $\log(8233)$

$$\Rightarrow 2833 \times 10^6 - 1 = 3 \times 23 \times 8233 \times 4987$$

→ This equation enables the computation of $\log(4987)$

$$\Rightarrow 3395 \times 10^5 - 1 = 19 \times 4987 \times 3583$$

→ This equation enables the computation of $\log(3583)$

$$\Rightarrow 1288 \times 10^7 - 1 = 3^3 \times 29 \times 3583 \times 4591$$

→ This equation enables the computation of $\log(4591)$

$$\Rightarrow 893 \times 10^6 + 1 = 3 \times 23 \times 4591 \times 2819$$

→ This equation enables the computation of $\log(2819)$

page 306:

$$\Rightarrow 1926 \times 10^6 - 1 = 7 \times 11 \times 19 \times 467 \times 2819$$

→ This equation enables the computation of $\log(2819)$

$$\Rightarrow 1509 \times 10^7 + 1 = 577 \times 1303 \times 20071$$

→ This equation enables the computation of $\log(20071)$

$$\Rightarrow 17255 \times 10^5 + 1 = 3 \times 43 \times 587 \times 22787$$

→ This equation enables the computation of $\log(22787)$

$$\Rightarrow 5532 \times 10^5 - 1 = 11 \times 2207 \times 22787$$

→ This equation enables the computation of $\log(22787)$

$$\Rightarrow 2474 \times 10^8 + 1 = 3^3 \times 7 \times 11 \times 59 \times 283 \times 7127$$

→ This equation enables the computation of $\log(7127)$

page 307:

$$\Rightarrow 2045 \times 10^6 - 1 = 7 \times 179 \times 229 \times 7127$$

→ This equation enables the computation of $\log(7127)$

$$\Rightarrow 973 \times 10^8 - 1 = 3^2 \times 1009 \times 1093 \times 9803$$

→ This equation enables the computation of $\log(9803)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $2503 \times 10^5 - 1 = 3^2 \times 9803 \times 2837$
→ This equation enables the computation of $\log(2837)$
- ⇒ $334 \times 10^5 + 1 = 61 \times 193 \times 2837$
→ This equation enables the computation of $\log(2837)$
- ⇒ $584 \times 10^6 - 1 = 11 \times 29 \times 197 \times 9293$
→ This equation enables the computation of $\log(9293)$

page 308:

- ⇒ $2642 \times 10^4 - 1 = 9293 \times 2843$
→ This equation enables the computation of $\log(2843)$
- ⇒ $197 \times 10^6 - 1 = 7 \times 19 \times 521 \times 2843$
→ This equation enables the computation of $\log(2843)$
- ⇒ $2817 \times 10^7 + 1 = 11 \times 13 \times 19^2 \times 191 \times 2857$
→ This equation enables the computation of $\log(2857)$
- ⇒ $2457 \times 10^6 + 1 = 23 \times 139 \times 269 \times 2857$
→ This equation enables the computation of $\log(2857)$
- ⇒ $263 \times 10^7 - 1 = 11 \times 193 \times 433 \times 2861$
→ This equation enables the computation of $\log(2861)$
- ⇒ $231 \times 10^6 + 1 = 263 \times 307 \times 2861$
→ This equation enables the computation of $\log(2861)$

page 309:

- ⇒ $481 \times 10^7 + 1 = 29 \times 53 \times 1087 \times 2879$
→ This equation enables the computation of $\log(2879)$
- ⇒ $1931 \times 10^6 + 1 = 3 \times 7 \times 19 \times 41^2 \times 2879$
→ This equation enables the computation of $\log(2879)$
- ⇒ $737 \times 10^7 + 1 = 3^3 \times 7 \times 13 \times 1039 \times 2887$
→ This equation enables the computation of $\log(2887)$
- ⇒ $1596 \times 10^6 + 1 = 17 \times 31 \times 1049 \times 2887$
→ This equation enables the computation of $\log(2887)$
- ⇒ $659 \times 10^7 - 1 = 11 \times 227 \times 911 \times 2897$
→ This equation enables the computation of $\log(2897)$

page 310:

- ⇒ $796 \times 10^6 - 1 = 3 \times 67 \times 1367 \times 2897$
→ This equation enables the computation of $\log(2897)$
- ⇒ $199 \times 10^8 - 1 = 3^3 \times 11 \times 19 \times 677 \times 5209$
→ This equation enables the computation of $\log(5209)$
- ⇒ $1195 \times 10^6 - 1 = 3 \times 73 \times 1277 \times 4273$
→ This equation enables the computation of $\log(4273)$
- ⇒ $4273 \times 10^6 - 1 = 3 \times 43 \times 5209 \times 6359$
→ This equation enables the computation of $\log(6359)$
- ⇒ $2086 \times 10^6 + 1 = 113 \times 6359 \times 2903$
→ This equation enables the computation of $\log(2903)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

page 311:

- ⇒ $1124 \times 10^8 + 1 = 3^4 \times 29 \times 53 \times 311 \times 2903$
→ This equation enables the computation of $\log(2903)$
- ⇒ $1885 \times 10^6 + 1 = 17 \times 47 \times 811 \times 2909$
→ This equation enables the computation of $\log(2909)$
- ⇒ $1396 \times 10^5 + 1 = 37 \times 1297 \times 2909$
→ This equation enables the computation of $\log(2909)$
- ⇒ $1542 \times 10^7 + 1 = 7 \times 41 \times 113 \times 163 \times 2917$
→ This equation enables the computation of $\log(2917)$
- ⇒ $835 \times 10^6 + 1 = 11 \times 53 \times 491 \times 2917$
→ This equation enables the computation of $\log(2917)$
- ⇒ $2743 \times 10^6 - 1 = 3 \times 19 \times 41 \times 401 \times 2927$
→ This equation enables the computation of $\log(2927)$

page 312:

- ⇒ $184 \times 10^6 + 1 = 37 \times 1699 \times 2927$
→ This equation enables the computation of $\log(2927)$
- ⇒ $6148 \times 10^9 - 1 = 3^2 \times 11 \times 13 \times 547 \times 1061 \times 8231$
→ This equation enables the computation of $\log(8231)$
- ⇒ $2661 \times 10^5 - 1 = 11 \times 8231 \times 2939$
→ This equation enables the computation of $\log(2939)$
- ⇒ $278 \times 10^5 + 1 = 3^2 \times 1051 \times 2939$
→ This equation enables the computation of $\log(2939)$
- ⇒ $2441 \times 10^6 + 1 = 3 \times 11 \times 37 \times 677 \times 2953$
→ This equation enables the computation of $\log(2953)$

page 313:

- ⇒ $512 \times 10^6 - 1 = 7 \times 17 \times 31 \times 47 \times 2953$
→ This equation enables the computation of $\log(2953)$
- ⇒ $1761 \times 10^6 + 1 = 449 \times 1321 \times 2969$
→ This equation enables the computation of $\log(2969)$
- ⇒ $1208 \times 10^6 - 1 = 251 \times 1621 \times 2969$
→ This equation enables the computation of $\log(2969)$
- ⇒ $718 \times 10^7 - 1 = 3 \times 23 \times 113 \times 239 \times 3853$
→ This equation enables the computation of $\log(3853)$
- ⇒ $2446 \times 10^5 - 1 = 3 \times 7 \times 3853 \times 3023$
→ This equation enables the computation of $\log(3023)$

page 314:

- ⇒ $2663 \times 10^6 - 1 = 11 \times 53 \times 1511 \times 3023$
→ This equation enables the computation of $\log(3023)$
- ⇒ $2611 \times 10^5 + 1 = 149 \times 577 \times 3037$
→ This equation enables the computation of $\log(3037)$
- ⇒ $426 \times 10^5 - 1 = 13^2 \times 83 \times 3037$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(3037)$
- ⇒ $7512 \times 10^6 + 1 = 11 \times 17 \times 61 \times 67 \times 9829$
- This equation enables the computation of $\log(9829)$
- ⇒ $2717 \times 10^7 + 1 = 3^2 \times 101 \times 9829 \times 3041$
- This equation enables the computation of $\log(3041)$

page 315:

- ⇒ $199 \times 10^6 - 1 = 3^2 \times 11 \times 661 \times 3041$
- This equation enables the computation of $\log(3041)$
- ⇒ $2727 \times 10^7 - 1 = 11 \times 17 \times 37 \times 863 \times 4567$
- This equation enables the computation of $\log(4567)$
- ⇒ $132 \times 10^6 + 1 = 7 \times 4567 \times 4129$
- This equation enables the computation of $\log(4129)$
- ⇒ $3997 \times 10^6 - 1 = 3^4 \times 17 \times 19 \times 37 \times 4129$
- This equation enables the computation of $\log(4129)$
- ⇒ $8723 \times 10^6 + 1 = 3 \times 337 \times 827 \times 10433$
- This equation enables the computation of $\log(10433)$
- ⇒ $171 \times 10^7 - 1 = 251 \times 653 \times 10433$
- This equation enables the computation of $\log(10433)$

page 316:

- ⇒ $2105 \times 10^9 + 1 = 3^4 \times 151 \times 7523 \times 22877$
- This equation enables the computation of $\log(22877)$
- ⇒ $1827 \times 10^8 - 1 = 11 \times 277 \times 2621 \times 22877$
- This equation enables the computation of $\log(22877)$
- ⇒ $7217 \times 10^6 - 1 = 11 \times 173 \times 463 \times 8191$
- This equation enables the computation of $\log(8191)$
- ⇒ $974 \times 10^6 + 1 = 3 \times 13 \times 8191 \times 3049$
- This equation enables the computation of $\log(3049)$
- ⇒ $2075 \times 10^6 - 1 = 617 \times 1103 \times 3049$
- This equation enables the computation of $\log(3049)$

page 317:

- ⇒ $2922 \times 10^5 - 1 = 7 \times 13 \times 1049 \times 3061$
- This equation enables the computation of $\log(3061)$
- ⇒ $1671 \times 10^4 - 1 = 53 \times 103 \times 3061$
- This equation enables the computation of $\log(3061)$
- ⇒ $7283 \times 10^8 - 1 = 11 \times 13 \times 491 \times 1181 \times 8783$
- This equation enables the computation of $\log(8783)$
- ⇒ $1893 \times 10^5 - 1 = 7 \times 8783 \times 3079$
- This equation enables the computation of $\log(3079)$
- ⇒ $1966 \times 10^6 + 1 = 7^2 \times 83 \times 157 \times 3079$
- This equation enables the computation of $\log(3079)$

page 318:

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $397 \times 10^8 - 1 = 3^2 \times 11 \times 83 \times 1051 \times 4597$
→ This equation enables the computation of $\log(4597)$
- ⇒ $4597 \times 10^7 - 1 = 3 \times 7 \times 11 \times 17 \times 2161 \times 5417$
→ This equation enables the computation of $\log(5417)$
- ⇒ $82 \times 10^8 + 1 = 491 \times 5417 \times 3083$
→ This equation enables the computation of $\log(3083)$
- ⇒ $2034 \times 10^6 + 1 = 11 \times 37 \times 1621 \times 3083$
→ This equation enables the computation of $\log(3083)$
- ⇒ $2082 \times 10^6 + 1 = 353 \times 1619 \times 3643$
→ This equation enables the computation of $\log(3643)$
- ⇒ $2605 \times 10^5 + 1 = 23 \times 3643 \times 3109$
→ This equation enables the computation of $\log(3109)$

page 319:

- ⇒ $4779 \times 10^5 - 1 = 31 \times 1889 \times 8161$
→ This equation enables the computation of $\log(8161)$
- ⇒ $1294 \times 10^6 - 1 = 3 \times 17 \times 8161 \times 3109$
→ This equation enables the computation of $\log(3109)$
- ⇒ $18283 \times 10^7 + 1 = 11 \times 19 \times 157 \times 211 \times 26407$
→ This equation enables the computation of $\log(26407)$
- ⇒ $2019 \times 10^6 - 1 = 101 \times 757 \times 26407$
→ This equation enables the computation of $\log(26407)$
- ⇒ $8676 \times 10^6 + 1 = 19^2 \times 2719 \times 8839$
→ This equation enables the computation of $\log(8839)$

page 320:

- ⇒ $163 \times 10^6 - 1 = 3^3 \times 683 \times 8839$
→ This equation enables the computation of $\log(8839)$
- ⇒ $8182 \times 10^5 - 1 = 3^2 \times 23 \times 401 \times 9857$
→ This equation enables the computation of $\log(9857)$
- ⇒ $24475 \times 10^6 - 1 = 3 \times 31 \times 9857 \times 26699$
→ This equation enables the computation of $\log(26699)$
- ⇒ $4459 \times 10^5 - 1 = 3 \times 19 \times 293 \times 26699$
→ This equation enables the computation of $\log(26699)$
- ⇒ $21232 \times 10^4 - 1 = 3^2 \times 883 \times 26717$
→ This equation enables the computation of $\log(26717)$

page 321:

- ⇒ $5485 \times 10^4 + 1 = 2053 \times 26717$
→ This equation enables the computation of $\log(26717)$
- ⇒ $967 \times 10^6 - 1 = 3 \times 7 \times 53 \times 61 \times 14243$
→ This equation enables the computation of $\log(14243)$
- ⇒ $4573 \times 10^5 + 1 = 97 \times 331 \times 14243$
→ This equation enables the computation of $\log(14243)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- $\Rightarrow 3317 \times 10^6 - 1 = 17 \times 41 \times 977 \times 4871$
—→ This equation enables the computation of $\log(4871)$
- $\Rightarrow 3944 \times 10^5 - 1 = 7 \times 43 \times 269 \times 4871$
—→ This equation enables the computation of $\log(4871)$

page 322:

- $\Rightarrow 468 \times 10^6 + 1 = 7 \times 19 \times 239 \times 14723$
—→ This equation enables the computation of $\log(14723)$
- $\Rightarrow 12092 \times 10^4 - 1 = 43 \times 191 \times 14723$
—→ This equation enables the computation of $\log(14723)$
- $\Rightarrow 885 \times 10^8 + 1 = 7^2 \times 17 \times 23 \times 1481 \times 3119$
—→ This equation enables the computation of $\log(3119)$
- $\Rightarrow 1951 \times 10^6 - 1 = 3 \times 13 \times 43 \times 373 \times 3119$
—→ This equation enables the computation of $\log(3119)$
- $\Rightarrow 8 \times 10^9 + 1 = 3^2 \times 7 \times 23 \times 29 \times 61 \times 3121$
—→ This equation enables the computation of $\log(3121)$
- $\Rightarrow 1363 \times 10^6 - 1 = 3 \times 149 \times 977 \times 3121$
—→ This equation enables the computation of $\log(3121)$

page 323:

- $\Rightarrow 2249 \times 10^6 - 1 = 19 \times 97 \times 389 \times 3137$
—→ This equation enables the computation of $\log(3137)$
- $\Rightarrow 888 \times 10^6 + 1 = 7^2 \times 53 \times 109 \times 3137$
—→ This equation enables the computation of $\log(3137)$
- $\Rightarrow 2691 \times 10^4 - 1 = 29 \times 293 \times 3167$
—→ This equation enables the computation of $\log(3167)$
- $\Rightarrow 476 \times 10^4 + 1 = 3^2 \times 167 \times 3167$
—→ This equation enables the computation of $\log(3167)$
- $\Rightarrow 2379 \times 10^5 - 1 = 41 \times 1831 \times 3169$
—→ This equation enables the computation of $\log(3169)$

page 324:

- $\Rightarrow 79 \times 10^6 + 1 = 97 \times 257 \times 3169$
—→ This equation enables the computation of $\log(3169)$
- $\Rightarrow 3817 \times 10^7 + 1 = 7 \times 577 \times 1373 \times 6883$
—→ This equation enables the computation of $\log(6883)$
- $\Rightarrow 107 \times 10^9 + 1 = 3^3 \times 181 \times 6883 \times 3181$
—→ This equation enables the computation of $\log(3181)$
- $\Rightarrow 2024 \times 10^7 - 1 = 37 \times 383 \times 449 \times 3181$
—→ This equation enables the computation of $\log(3181)$
- $\Rightarrow 231 \times 10^7 + 1 = 17 \times 97 \times 439 \times 3191$
—→ This equation enables the computation of $\log(3191)$
- $\Rightarrow 881 \times 10^6 - 1 = 11 \times 19 \times 1321 \times 3191$
—→ This equation enables the computation of $\log(3191)$

page 325:

- ⇒ $287 \times 10^9 + 1 = 3^2 \times 11 \times 13 \times 103 \times 673 \times 3217$
→ This equation enables the computation of $\log(3217)$
- ⇒ $2781 \times 10^5 - 1 = 137 \times 631 \times 3217$
→ This equation enables the computation of $\log(3217)$
- ⇒ $3337 \times 10^7 - 1 = 3 \times 7 \times 41^2 \times 179 \times 5281$
→ This equation enables the computation of $\log(5281)$
- ⇒ $1684 \times 10^6 - 1 = 3^2 \times 11 \times 5281 \times 3221$
→ This equation enables the computation of $\log(3221)$
- ⇒ $735 \times 10^5 - 1 = 19 \times 1201 \times 3221$
→ This equation enables the computation of $\log(3221)$

page 326:

- ⇒ $2267 \times 10^7 + 1 = 3^2 \times 11 \times 167 \times 421 \times 3257$
→ This equation enables the computation of $\log(3257)$
- ⇒ $3128 \times 10^6 + 1 = 3 \times 7 \times 19 \times 29 \times 83 \times 3257$
→ This equation enables the computation of $\log(3257)$
- ⇒ $551 \times 10^9 + 1 = 3 \times 11 \times 859 \times 2441 \times 7963$
→ This equation enables the computation of $\log(7963)$
- ⇒ $641 \times 10^7 - 1 = 13 \times 19 \times 7963 \times 3259$
→ This equation enables the computation of $\log(3259)$
- ⇒ $3151 \times 10^6 - 1 = 3^2 \times 7 \times 103 \times 149 \times 3259$
→ This equation enables the computation of $\log(3259)$

page 327:

- ⇒ $2017 \times 10^6 + 1 = 73 \times 8447 \times 3271$
→ This equation enables the computation of $\log(3271)$
- ⇒ $2727 \times 10^5 - 1 = 11^2 \times 13 \times 53 \times 3271$
→ This equation enables the computation of $\log(3271)$
- ⇒ $5545 \times 10^6 - 1 = 3^2 \times 7 \times 11 \times 1171 \times 6833$
→ This equation enables the computation of $\log(6833)$
- ⇒ $2447 \times 10^8 - 1 = 7^2 \times 13 \times 17 \times 6833 \times 3307$
→ This equation enables the computation of $\log(3307)$
- ⇒ $1321 \times 10^7 - 1 = 3 \times 7 \times 37 \times 53 \times 97 \times 3307$
→ This equation enables the computation of $\log(3307)$

page 328:

- ⇒ $2473 \times 10^7 + 1 = 7 \times 463 \times 1951 \times 3911$
→ This equation enables the computation of $\log(3911)$
- ⇒ $907 \times 10^5 + 1 = 7 \times 3911 \times 3313$
→ This equation enables the computation of $\log(3313)$
- ⇒ $2444 \times 10^4 + 1 = 3 \times 2459 \times 3313$
→ This equation enables the computation of $\log(3313)$
- ⇒ $1874 \times 10^7 + 1 = 3 \times 1019 \times 1847 \times 3319$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(3319)$
- ⇒ $1174 \times 10^6 - 1 = 3 \times 157 \times 751 \times 3319$
- This equation enables the computation of $\log(3319)$

page 329:

- ⇒ $2528 \times 10^6 + 1 = 3^2 \times 73 \times 1151 \times 3343$
- This equation enables the computation of $\log(3343)$
- ⇒ $2075 \times 10^4 + 1 = 3 \times 2069 \times 3343$
- This equation enables the computation of $\log(3343)$
- ⇒ $2712 \times 10^5 - 1 = 7 \times 89 \times 131 \times 3323$
- This equation enables the computation of $\log(3323)$
- ⇒ $611 \times 10^5 + 1 = 3^4 \times 227 \times 3323$
- This equation enables the computation of $\log(3323)$
- ⇒ $3095 \times 10^5 + 1 = 3^3 \times 31 \times 67 \times 5519$
- This equation enables the computation of $\log(5519)$

page 330:

- ⇒ $3069 \times 10^6 + 1 = 107 \times 5519 \times 5197$
- This equation enables the computation of $\log(5197)$
- ⇒ $2128 \times 10^6 - 1 = 3 \times 41 \times 5197 \times 3329$
- This equation enables the computation of $\log(3329)$
- ⇒ $2023 \times 10^5 + 1 = 67 \times 907 \times 3329$
- This equation enables the computation of $\log(3329)$
- ⇒ $2993 \times 10^6 + 1 = 3 \times 229 \times 1297 \times 3359$
- This equation enables the computation of $\log(3359)$
- ⇒ $301 \times 10^5 - 1 = 3 \times 29 \times 103 \times 3359$
- This equation enables the computation of $\log(3359)$

page 331:

- ⇒ $3033 \times 10^5 + 1 = 31 \times 41 \times 71 \times 3361$
- This equation enables the computation of $\log(3361)$
- ⇒ $328 \times 10^5 - 1 = 3 \times 3253 \times 3361$
- This equation enables the computation of $\log(3361)$
- ⇒ $7779 \times 10^7 + 1 = 7 \times 17 \times 47 \times 1429 \times 9733$
- This equation enables the computation of $\log(9733)$
- ⇒ $9733 \times 10^6 + 1 = 457 \times 1871 \times 11383$
- This equation enables the computation of $\log(11383)$
- ⇒ $165 \times 10^7 - 1 = 43 \times 11383 \times 3371$
- This equation enables the computation of $\log(3371)$
- ⇒ $1721 \times 10^6 + 1 = 3 \times 7^2 \times 23 \times 151 \times 3371$
- This equation enables the computation of $\log(3371)$

page 332:

- ⇒ $4511 \times 10^6 - 1 = 11 \times 31 \times 2143 \times 6173$
- This equation enables the computation of $\log(6173)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $387 \times 10^8 + 1 = 13 \times 107 \times 6173 \times 4507$
→ This equation enables the computation of $\log(4507)$
- ⇒ $2644 \times 10^6 + 1 = 173 \times 4507 \times 3391$
→ This equation enables the computation of $\log(3391)$
- ⇒ $747 \times 10^6 - 1 = 43 \times 47 \times 109 \times 3391$
→ This equation enables the computation of $\log(3391)$
- ⇒ $1535 \times 10^6 + 1 = 3 \times 179 \times 839 \times 3407$
→ This equation enables the computation of $\log(3407)$

page 333:

- ⇒ $1685 \times 10^5 - 1 = 19^2 \times 137 \times 3407$
→ This equation enables the computation of $\log(3407)$
- ⇒ $1221 \times 10^7 + 1 = 19 \times 71 \times 1031 \times 8779$
→ This equation enables the computation of $\log(8779)$
- ⇒ $1 \times 10^{11} + 1 = 11^2 \times 23 \times 8779 \times 4093$
→ This equation enables the computation of $\log(4093)$
- ⇒ $2325 \times 10^6 - 1 = 7 \times 19 \times 4093 \times 4271$
→ This equation enables the computation of $\log(4271)$
- ⇒ $1895 \times 10^5 - 1 = 13 \times 4271 \times 3413$
→ This equation enables the computation of $\log(3413)$

page 334:

- ⇒ $1518 \times 10^5 + 1 = 79 \times 563 \times 3413$
→ This equation enables the computation of $\log(3413)$
- ⇒ $248 \times 10^7 + 1 = 3 \times 17 \times 23 \times 613 \times 3449$
→ This equation enables the computation of $\log(3449)$
- ⇒ $2792 \times 10^5 - 1 = 13^2 \times 479 \times 3449$
→ This equation enables the computation of $\log(3449)$
- ⇒ $541 \times 10^8 - 1 = 3^2 \times 19 \times 23^2 \times 173 \times 3457$
→ This equation enables the computation of $\log(3457)$
- ⇒ $2245 \times 10^6 - 1 = 3 \times 11^2 \times 1789 \times 3457$
→ This equation enables the computation of $\log(3457)$

page 335:

- ⇒ $665 \times 10^6 + 1 = 3^2 \times 37 \times 577 \times 3461$
→ This equation enables the computation of $\log(3461)$
- ⇒ $272 \times 10^5 - 1 = 29 \times 271 \times 3461$
→ This equation enables the computation of $\log(3461)$
- ⇒ $1431 \times 10^9 + 1 = 11^2 \times 13 \times 443 \times 593 \times 3463$
→ This equation enables the computation of $\log(3463)$
- ⇒ $2682 \times 10^6 - 1 = 7 \times 31 \times 43 \times 83 \times 3463$
→ This equation enables the computation of $\log(3463)$
- ⇒ $1556 \times 10^6 + 1 = 3^2 \times 47 \times 1061 \times 3467$
→ This equation enables the computation of $\log(3467)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\Rightarrow 1692 \times 10^5 + 1 = 37 \times 1319 \times 3467$$

→ This equation enables the computation of $\log(3467)$

page 336:

$$\Rightarrow 816 \times 10^8 + 1 = 13 \times 23 \times 151 \times 521 \times 3469$$

→ This equation enables the computation of $\log(3469)$

$$\Rightarrow 1813 \times 10^6 + 1 = 23 \times 31 \times 733 \times 3469$$

→ This equation enables the computation of $\log(3469)$

$$\Rightarrow 3202 \times 10^7 - 1 = 3 \times 13 \times 23 \times 29 \times 349 \times 3527$$

→ This equation enables the computation of $\log(3527)$

$$\Rightarrow 277 \times 10^6 - 1 = 3 \times 47 \times 557 \times 3527$$

→ This equation enables the computation of $\log(3527)$

$$\Rightarrow 1829 \times 10^7 + 1 = 3 \times 7 \times 13 \times 17 \times 19 \times 41 \times 5059$$

→ This equation enables the computation of $\log(5059)$

page 337:

$$\Rightarrow 1946 \times 10^6 - 1 = 109 \times 5059 \times 3529$$

→ This equation enables the computation of $\log(3529)$

$$\Rightarrow 1583 \times 10^6 + 1 = 3^2 \times 11 \times 23 \times 197 \times 3529$$

→ This equation enables the computation of $\log(3529)$

$$\Rightarrow 481 \times 10^7 - 1 = 3 \times 7 \times 61 \times 1061 \times 3539$$

→ This equation enables the computation of $\log(3539)$

$$\Rightarrow 1271 \times 10^6 - 1 = 83 \times 4327 \times 3539$$

→ This equation enables the computation of $\log(3539)$

$$\Rightarrow 1643 \times 10^7 + 1 = 3 \times 317 \times 2909 \times 5939$$

→ This equation enables the computation of $\log(5939)$

page 338:

$$\Rightarrow 2103 \times 10^4 - 1 = 5939 \times 3541$$

→ This equation enables the computation of $\log(3541)$

$$\Rightarrow 2689 \times 10^5 - 1 = 3 \times 17 \times 1489 \times 3541$$

→ This equation enables the computation of $\log(3541)$

$$\Rightarrow 1969 \times 10^6 - 1 = 3 \times 31 \times 47 \times 127 \times 3547$$

→ This equation enables the computation of $\log(3547)$

$$\Rightarrow 1592 \times 10^5 + 1 = 3^2 \times 4987 \times 3547$$

→ This equation enables the computation of $\log(3547)$

$$\Rightarrow 446 \times 10^7 - 1 = 7 \times 13 \times 47 \times 293 \times 3559$$

→ This equation enables the computation of $\log(3559)$

page 339:

$$\Rightarrow 901 \times 10^6 - 1 = 3^2 \times 23 \times 1223 \times 3559$$

→ This equation enables the computation of $\log(3559)$

$$\Rightarrow 863 \times 10^6 - 1 = 67 \times 3607 \times 3571$$

→ This equation enables the computation of $\log(3571)$

$$\Rightarrow 2083 \times 10^5 + 1 = 7 \times 13 \times 641 \times 3571$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(3571)$
- ⇒ $1339 \times 10^7 - 1 = 3 \times 23 \times 47 \times 1153 \times 3581$
- This equation enables the computation of $\log(3581)$
- ⇒ $2647 \times 10^6 - 1 = 3^3 \times 7 \times 3911 \times 3581$
- This equation enables the computation of $\log(3581)$

page 340:

- ⇒ $2179 \times 10^6 + 1 = 139 \times 4363 \times 3593$
- This equation enables the computation of $\log(3593)$
- ⇒ $1414 \times 10^6 - 1 = 3^2 \times 73 \times 599 \times 3593$
- This equation enables the computation of $\log(3593)$
- ⇒ $865 \times 10^8 - 1 = 3^2 \times 7 \times 293 \times 1297 \times 3613$
- This equation enables the computation of $\log(3613)$
- ⇒ $1493 \times 10^5 - 1 = 31^2 \times 43 \times 3613$
- This equation enables the computation of $\log(3613)$
- ⇒ $1066 \times 10^7 - 1 = 3 \times 11 \times 163 \times 547 \times 3623$
- This equation enables the computation of $\log(3623)$

page 341:

- ⇒ $209 \times 10^6 + 1 = 3 \times 7 \times 41 \times 67 \times 3623$
- This equation enables the computation of $\log(3623)$
- ⇒ $4613 \times 10^5 + 1 = 3 \times 43 \times 647 \times 5527$
- This equation enables the computation of $\log(5527)$
- ⇒ $1004 \times 10^7 - 1 = 197 \times 5527 \times 9221$
- This equation enables the computation of $\log(9221)$
- ⇒ $1031 \times 10^5 + 1 = 3 \times 9221 \times 3727$
- This equation enables the computation of $\log(3727)$
- ⇒ $1015 \times 10^6 - 1 = 3 \times 13 \times 3727 \times 6983$
- This equation enables the computation of $\log(6983)$

page 342:

- ⇒ $339 \times 10^8 + 1 = 7 \times 191 \times 6983 \times 3631$
- This equation enables the computation of $\log(3631)$
- ⇒ $2314 \times 10^5 - 1 = 3^2 \times 73 \times 97 \times 3631$
- This equation enables the computation of $\log(3631)$
- ⇒ $3682 \times 10^5 - 1 = 3^4 \times 1031 \times 4409$
- This equation enables the computation of $\log(4409)$
- ⇒ $3159 \times 10^6 + 1 = 197 \times 4409 \times 3637$
- This equation enables the computation of $\log(3637)$
- ⇒ $223 \times 10^8 - 1 = 3 \times 41 \times 79 \times 631 \times 3637$
- This equation enables the computation of $\log(3637)$

page 343:

- ⇒ $2102 \times 10^7 + 1 = 3 \times 7 \times 11 \times 13 \times 1913 \times 3659$
- This equation enables the computation of $\log(3659)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $2022 \times 10^5 - 1 = 73 \times 757 \times 3659$
→ This equation enables the computation of $\log(3659)$
- ⇒ $935 \times 10^8 - 1 = 7 \times 29 \times 37 \times 2897 \times 4297$
→ This equation enables the computation of $\log(4297)$
- ⇒ $756 \times 10^7 - 1 = 479 \times 4297 \times 3673$
→ This equation enables the computation of $\log(3673)$
- ⇒ $638 \times 10^4 + 1 = 3^2 \times 193 \times 3673$
→ This equation enables the computation of $\log(3673)$

page 344:

- ⇒ $967 \times 10^8 + 1 = 11 \times 71 \times 151 \times 223 \times 3677$
→ This equation enables the computation of $\log(3677)$
- ⇒ $1098 \times 10^6 + 1 = 7 \times 29 \times 1471 \times 3677$
→ This equation enables the computation of $\log(3677)$
- ⇒ $2737 \times 10^5 + 1 = 101 \times 733 \times 3697$
→ This equation enables the computation of $\log(3697)$
- ⇒ $96 \times 10^6 - 1 = 23 \times 1129 \times 3697$
→ This equation enables the computation of $\log(3697)$
- ⇒ $1896 \times 10^6 + 1 = 7 \times 103 \times 709 \times 3709$
→ This equation enables the computation of $\log(3709)$

page 345:

- ⇒ $415 \times 10^5 + 1 = 67 \times 167 \times 3709$
→ This equation enables the computation of $\log(3709)$
- ⇒ $2001 \times 10^5 - 1 = 11^2 \times 443 \times 3733$
→ This equation enables the computation of $\log(3733)$
- ⇒ $1732 \times 10^5 + 1 = 13 \times 43 \times 83 \times 3733$
→ This equation enables the computation of $\log(3733)$
- ⇒ $2899 \times 10^6 - 1 = 3^2 \times 7 \times 31 \times 397 \times 3739$
→ This equation enables the computation of $\log(3739)$
- ⇒ $84 \times 10^7 + 1 = 271 \times 829 \times 3739$
→ This equation enables the computation of $\log(3739)$

page 346:

- ⇒ $309 \times 10^6 - 1 = 7 \times 11^2 \times 97 \times 3761$
→ This equation enables the computation of $\log(3761)$
- ⇒ $671 \times 10^5 + 1 = 3 \times 19 \times 313 \times 3761$
→ This equation enables the computation of $\log(3761)$
- ⇒ $767 \times 10^7 + 1 = 3 \times 107 \times 6343 \times 3767$
→ This equation enables the computation of $\log(3767)$
- ⇒ $2407 \times 10^5 - 1 = 3 \times 19^2 \times 59 \times 3767$
→ This equation enables the computation of $\log(3767)$
- ⇒ $4947 \times 10^7 - 1 = 7 \times 37 \times 109 \times 349 \times 5021$
→ This equation enables the computation of $\log(5021)$

page 347:

- ⇒ $74 \times 10^7 + 1 = 3 \times 13 \times 5021 \times 3779$
→ This equation enables the computation of $\log(3779)$
- ⇒ $2199 \times 10^4 + 1 = 11 \times 23^2 \times 3779$
→ This equation enables the computation of $\log(3779)$
- ⇒ $3171 \times 10^6 + 1 = 13 \times 227 \times 283 \times 3797$
→ This equation enables the computation of $\log(3797)$
- ⇒ $626 \times 10^6 - 1 = 113 \times 1459 \times 3797$
→ This equation enables the computation of $\log(3797)$
- ⇒ $1189 \times 10^6 - 1 = 3^3 \times 11 \times 773 \times 5179$
→ This equation enables the computation of $\log(5179)$

page 348:

- ⇒ $5179 \times 10^7 - 1 = 3 \times 1291 \times 2339 \times 5717$
→ This equation enables the computation of $\log(5717)$
- ⇒ $538 \times 10^7 + 1 = 137 \times 5717 \times 6869$
→ This equation enables the computation of $\log(6869)$
- ⇒ $1489 \times 10^6 - 1 = 3 \times 19 \times 6869 \times 3803$
→ This equation enables the computation of $\log(3803)$
- ⇒ $3481 \times 10^5 - 1 = 3 \times 13 \times 2347 \times 3803$
→ This equation enables the computation of $\log(3803)$
- ⇒ $703 \times 10^6 + 1 = 11 \times 73 \times 229 \times 3823$
→ This equation enables the computation of $\log(3823)$

page 349:

- ⇒ $3207 \times 10^5 + 1 = 149 \times 563 \times 3823$
→ This equation enables the computation of $\log(3823)$
- ⇒ $1713 \times 10^5 - 1 = 13 \times 1439 \times 9157$
→ This equation enables the computation of $\log(9157)$
- ⇒ $835 \times 10^8 - 1 = 3 \times 13 \times 61 \times 9157 \times 3833$
→ This equation enables the computation of $\log(3833)$
- ⇒ $3007 \times 10^6 - 1 = 3^2 \times 67 \times 1301 \times 3833$
→ This equation enables the computation of $\log(3833)$
- ⇒ $432 \times 10^7 + 1 = 23 \times 59 \times 643 \times 4951$
→ This equation enables the computation of $\log(4951)$

page 350:

- ⇒ $5582 \times 10^6 - 1 = 181 \times 4951 \times 6229$
→ This equation enables the computation of $\log(6229)$
- ⇒ $647 \times 10^6 + 1 = 3^3 \times 6229 \times 3847$
→ This equation enables the computation of $\log(3847)$
- ⇒ $4244 \times 10^6 + 1 = 3 \times 79 \times 3463 \times 5171$
→ This equation enables the computation of $\log(5171)$
- ⇒ $3527 \times 10^7 + 1 = 3^2 \times 197 \times 5171 \times 3847$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(3847)$
- ⇒ $1599 \times 10^6 + 1 = 359 \times 1153 \times 3863$
- This equation enables the computation of $\log(3863)$
- ⇒ $999 \times 10^7 - 1 = 7^2 \times 89 \times 593 \times 3863$
- This equation enables the computation of $\log(3863)$

page 351:

- ⇒ $223 \times 10^7 - 1 = 3 \times 19 \times 10091 \times 3877$
- This equation enables the computation of $\log(3877)$
- ⇒ $2915 \times 10^5 - 1 = 7 \times 23 \times 467 \times 3877$
- This equation enables the computation of $\log(3877)$
- ⇒ $5957 \times 10^5 - 1 = 31 \times 2579 \times 7451$
- This equation enables the computation of $\log(7451)$
- ⇒ $2831 \times 10^6 - 1 = 97 \times 7451 \times 3917$
- This equation enables the computation of $\log(3917)$
- ⇒ $892 \times 10^7 + 1 = 11 \times 23 \times 9001 \times 3917$
- This equation enables the computation of $\log(3917)$

page 352:

- ⇒ $2045 \times 10^8 + 1 = 3 \times 11 \times 89 \times 109 \times 163 \times 3919$
- This equation enables the computation of $\log(3919)$
- ⇒ $855 \times 10^7 + 1 = 1019 \times 2141 \times 3919$
- This equation enables the computation of $\log(3919)$
- ⇒ $536 \times 10^8 - 1 = 7^2 \times 13 \times 89 \times 241 \times 3923$
- This equation enables the computation of $\log(3923)$
- ⇒ $1322 \times 10^6 + 1 = 3^3 \times 7 \times 1783 \times 3923$
- This equation enables the computation of $\log(3923)$
- ⇒ $848 \times 10^6 - 1 = 7 \times 11 \times 2803 \times 3929$
- This equation enables the computation of $\log(3929)$

page 353:

- ⇒ $3307 \times 10^5 + 1 = 73 \times 1153 \times 3929$
- This equation enables the computation of $\log(3929)$
- ⇒ $1647 \times 10^7 + 1 = 7^2 \times 13 \times 53 \times 71 \times 6871$
- This equation enables the computation of $\log(6871)$
- ⇒ $2728 \times 10^6 + 1 = 101 \times 6871 \times 3931$
- This equation enables the computation of $\log(3931)$
- ⇒ $443 \times 10^9 + 1 = 3 \times 13 \times 29 \times 37 \times 2693 \times 3931$
- This equation enables the computation of $\log(3931)$
- ⇒ $5 \times 10^8 + 1 = 3 \times 43 \times 983 \times 3943$
- This equation enables the computation of $\log(3943)$

page 354:

- ⇒ $3443 \times 10^6 - 1 = 373 \times 2341 \times 3943$
- This equation enables the computation of $\log(3943)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $3092 \times 10^7 + 1 = 3 \times 11 \times 251 \times 941 \times 3967$
→ This equation enables the computation of $\log(3967)$
- ⇒ $875 \times 10^7 - 1 = 13 \times 383 \times 443 \times 3967$
→ This equation enables the computation of $\log(3967)$
- ⇒ $48 \times 10^9 - 1 = 7 \times 83 \times 139 \times 149 \times 3989$
→ This equation enables the computation of $\log(3989)$
- ⇒ $811 \times 10^7 - 1 = 3^2 \times 223 \times 1013 \times 3989$
→ This equation enables the computation of $\log(3989)$

page 355:

- ⇒ $2399 \times 10^7 + 1 = 3 \times 11 \times 19 \times 73 \times 131 \times 4001$
→ This equation enables the computation of $\log(4001)$
- ⇒ $2401 \times 10^4 + 1 = 17 \times 353 \times 4001$
→ This equation enables the computation of $\log(4001)$
- ⇒ $443 \times 10^6 + 1 = 3 \times 37 \times 997 \times 4003$
→ This equation enables the computation of $\log(4003)$
- ⇒ $3576 \times 10^5 - 1 = 157 \times 569 \times 4003$
→ This equation enables the computation of $\log(4003)$
- ⇒ $245 \times 10^6 + 1 = 3 \times 89 \times 229 \times 4007$
→ This equation enables the computation of $\log(4007)$

page 356:

- ⇒ $1979 \times 10^7 - 1 = 7^4 \times 11^2 \times 17 \times 4007$
→ This equation enables the computation of $\log(4007)$
- ⇒ $53 \times 10^9 + 1 = 3^3 \times 13 \times 191 \times 197 \times 4013$
→ This equation enables the computation of $\log(4013)$
- ⇒ $831 \times 10^6 + 1 = 13 \times 17 \times 937 \times 4013$
→ This equation enables the computation of $\log(4013)$
- ⇒ $3182 \times 10^6 - 1 = 79 \times 4013 \times 10037$
→ This equation enables the computation of $\log(10037)$
- ⇒ $907 \times 10^6 + 1 = 283 \times 487 \times 6581$
→ This equation enables the computation of $\log(6581)$

page 357:

- ⇒ $3084 \times 10^8 - 1 = 7^2 \times 13^2 \times 6581 \times 5659$
→ This equation enables the computation of $\log(5659)$
- ⇒ $2545 \times 10^7 - 1 = 3 \times 373 \times 5659 \times 4019$
→ This equation enables the computation of $\log(4019)$
- ⇒ $1303 \times 10^5 - 1 = 3 \times 101 \times 107 \times 4019$
→ This equation enables the computation of $\log(4019)$
- ⇒ $2781 \times 10^6 - 1 = 19 \times 89 \times 409 \times 4021$
→ This equation enables the computation of $\log(4021)$
- ⇒ $124 \times 10^7 + 1 = 359 \times 859 \times 4021$
→ This equation enables the computation of $\log(4021)$

page 358:

- ⇒ $1712 \times 10^8 - 1 = 7^2 \times 37 \times 131 \times 179 \times 4027$
→ This equation enables the computation of $\log(4027)$
- ⇒ $1961 \times 10^6 + 1 = 3^2 \times 61 \times 887 \times 4027$
→ This equation enables the computation of $\log(4027)$
- ⇒ $3935 \times 10^7 + 1 = 3 \times 13 \times 211 \times 1181 \times 4049$
→ This equation enables the computation of $\log(4049)$
- ⇒ $2909 \times 10^6 + 1 = 3 \times 71 \times 3373 \times 4049$
→ This equation enables the computation of $\log(4049)$
- ⇒ $2683 \times 10^7 + 1 = 7 \times 31 \times 109 \times 163 \times 6959$
→ This equation enables the computation of $\log(6959)$
- ⇒ $3101 \times 10^5 - 1 = 11 \times 6959 \times 4051$
→ This equation enables the computation of $\log(4051)$

page 359:

- ⇒ $3956 \times 10^6 - 1 = 7 \times 61 \times 2287 \times 4051$
→ This equation enables the computation of $\log(4051)$
- ⇒ $3007 \times 10^8 - 1 = 3^4 \times 7 \times 37 \times 3533 \times 4057$
→ This equation enables the computation of $\log(4057)$
- ⇒ $105 \times 10^9 + 1 = 13 \times 1031 \times 1931 \times 4057$
→ This equation enables the computation of $\log(4057)$
- ⇒ $1816 \times 10^6 - 1 = 3 \times 11 \times 59 \times 229 \times 4073$
→ This equation enables the computation of $\log(4073)$
- ⇒ $2205 \times 10^5 + 1 = 43 \times 1259 \times 4073$
→ This equation enables the computation of $\log(4073)$

page 360:

- ⇒ $2947 \times 10^6 - 1 = 3 \times 73 \times 3299 \times 4079$
→ This equation enables the computation of $\log(4079)$
- ⇒ $3162 \times 10^5 + 1 = 13 \times 67 \times 89 \times 4079$
→ This equation enables the computation of $\log(4079)$
- ⇒ $2822 \times 10^6 + 1 = 3 \times 43 \times 67 \times 79 \times 4133$
→ This equation enables the computation of $\log(4133)$
- ⇒ $1311 \times 10^6 - 1 = 17 \times 47 \times 397 \times 4133$
→ This equation enables the computation of $\log(4133)$
- ⇒ $333 \times 10^6 - 1 = 181 \times 443 \times 4153$
→ This equation enables the computation of $\log(4153)$

page 361:

- ⇒ $823 \times 10^5 + 1 = 7 \times 19 \times 149 \times 4153$
→ This equation enables the computation of $\log(4153)$
- ⇒ $525 \times 10^6 + 1 = 17^2 \times 19 \times 23 \times 4157$
→ This equation enables the computation of $\log(4157)$
- ⇒ $3064 \times 10^5 - 1 = 3 \times 79 \times 311 \times 4157$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(4157)$
- ⇒ $2353 \times 10^6 - 1 = 3 \times 7 \times 29 \times 929 \times 4159$
- This equation enables the computation of $\log(4159)$
- ⇒ $1424 \times 10^5 + 1 = 3 \times 101 \times 113 \times 4159$
- This equation enables the computation of $\log(4159)$

page 362:

- ⇒ $2084 \times 10^7 - 1 = 7 \times 13 \times 179 \times 271 \times 4721$
- This equation enables the computation of $\log(4721)$
- ⇒ $4721 \times 10^5 + 1 = 3 \times 23 \times 1009 \times 6781$
- This equation enables the computation of $\log(6781)$
- ⇒ $4048 \times 10^7 + 1 = 7^2 \times 29 \times 6781 \times 4201$
- This equation enables the computation of $\log(4201)$
- ⇒ $153 \times 10^7 - 1 = 11 \times 113 \times 293 \times 4201$
- This equation enables the computation of $\log(4201)$
- ⇒ $3936 \times 10^6 + 1 = 479 \times 947 \times 8677$
- This equation enables the computation of $\log(8677)$

page 363:

- ⇒ $4025 \times 10^5 - 1 = 11 \times 8677 \times 4217$
- This equation enables the computation of $\log(4217)$
- ⇒ $1014 \times 10^7 + 1 = 1367 \times 1759 \times 4217$
- This equation enables the computation of $\log(4217)$
- ⇒ $19 \times 10^5 + 1 = 257 \times 7393$
- This equation enables the computation of $\log(7393)$
- ⇒ $1257 \times 10^7 + 1 = 13 \times 31 \times 7393 \times 4219$
- This equation enables the computation of $\log(4219)$
- ⇒ $87 \times 10^6 - 1 = 17 \times 1213 \times 4219$
- This equation enables the computation of $\log(4219)$

page 364:

- ⇒ $603 \times 10^7 + 1 = 37 \times 89 \times 433 \times 4229$
- This equation enables the computation of $\log(4229)$
- ⇒ $2428 \times 10^6 - 1 = 3 \times 211 \times 907 \times 4229$
- This equation enables the computation of $\log(4229)$
- ⇒ $8262 \times 10^6 + 1 = 409 \times 2341 \times 8629$
- This equation enables the computation of $\log(8629)$
- ⇒ $2552 \times 10^7 + 1 = 3 \times 233 \times 8629 \times 4231$
- This equation enables the computation of $\log(4231)$
- ⇒ $134 \times 10^6 + 1 = 3^4 \times 17 \times 23 \times 4231$
- This equation enables the computation of $\log(4231)$

page 365:

- ⇒ $6226 \times 10^8 + 1 = 7^2 \times 809 \times 1693 \times 9277$
- This equation enables the computation of $\log(9277)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $2679 \times 10^7 - 1 = 7 \times 97 \times 9277 \times 4253$
 → This equation enables the computation of $\log(4253)$
- ⇒ $1574 \times 10^7 + 1 = 3^3 \times 11 \times 17 \times 733 \times 4253$
 → This equation enables the computation of $\log(4253)$
- ⇒ $3033 \times 10^6 + 1 = 19 \times 37 \times 1013 \times 4259$
 → This equation enables the computation of $\log(4259)$
- ⇒ $1226 \times 10^6 - 1 = 7 \times 17 \times 41 \times 59 \times 4259$
 → This equation enables the computation of $\log(4259)$
- ⇒ $4213 \times 10^6 - 1 = 3^3 \times 13 \times 23 \times 67 \times 7789$
 → This equation enables the computation of $\log(7789)$

page 366:

- ⇒ $2758 \times 10^7 - 1 = 3 \times 277 \times 7789 \times 4261$
 → This equation enables the computation of $\log(4261)$
- ⇒ $3096 \times 10^5 - 1 = 113 \times 643 \times 4261$
 → This equation enables the computation of $\log(4261)$
- ⇒ $415 \times 10^7 + 1 = 7 \times 149 \times 929 \times 4283$
 → This equation enables the computation of $\log(4283)$
- ⇒ $133 \times 10^6 - 1 = 3 \times 11 \times 941 \times 4283$
 → This equation enables the computation of $\log(4283)$
- ⇒ $5204 \times 10^8 + 1 = 3 \times 7 \times 61 \times 193 \times 223 \times 9439$
 → This equation enables the computation of $\log(9439)$

page 367:

- ⇒ $1255 \times 10^6 + 1 = 31 \times 9439 \times 4289$
 → This equation enables the computation of $\log(4289)$
- ⇒ $3034 \times 10^6 - 1 = 3^2 \times 53 \times 1483 \times 4289$
 → This equation enables the computation of $\log(4289)$
- ⇒ $2755 \times 10^9 - 1 = 3^4 \times 13 \times 733 \times 823 \times 4337$
 → This equation enables the computation of $\log(4337)$
- ⇒ $3332 \times 10^6 + 1 = 3 \times 11 \times 31 \times 751 \times 4337$
 → This equation enables the computation of $\log(4337)$
- ⇒ $479 \times 10^7 - 1 = 31 \times 149 \times 239 \times 4339$
 → This equation enables the computation of $\log(4339)$

page 368:

- ⇒ $2629 \times 10^4 + 1 = 73 \times 83 \times 4339$
 → This equation enables the computation of $\log(4339)$
- ⇒ $1331 \times 10^9 + 1 = 3^2 \times 7 \times 19 \times 31 \times 37 \times 193 \times 5023$
 → This equation enables the computation of $\log(5023)$
- ⇒ $2521 \times 10^7 - 1 = 3^2 \times 127 \times 5023 \times 4391$
 → This equation enables the computation of $\log(4391)$
- ⇒ $3255 \times 10^6 - 1 = 719 \times 1031 \times 4391$
 → This equation enables the computation of $\log(4391)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- $\Rightarrow 2382 \times 10^6 + 1 = 41 \times 73 \times 181 \times 4397$
—→ This equation enables the computation of $\log(4397)$
- $\Rightarrow 2015 \times 10^6 - 1 = 487 \times 941 \times 4397$
—→ This equation enables the computation of $\log(4397)$

page 369:

- $\Rightarrow 4245 \times 10^5 - 1 = 7 \times 11 \times 29 \times 43 \times 4421$
—→ This equation enables the computation of $\log(4421)$
- $\Rightarrow 2661 \times 10^4 - 1 = 13 \times 463 \times 4421$
—→ This equation enables the computation of $\log(4421)$
- $\Rightarrow 4412 \times 10^6 - 1 = 11 \times 29 \times 53 \times 59 \times 4423$
—→ This equation enables the computation of $\log(4423)$
- $\Rightarrow 4313 \times 10^5 - 1 = 13^2 \times 577 \times 4423$
—→ This equation enables the computation of $\log(4423)$
- $\Rightarrow 57 \times 10^7 + 1 = 53 \times 2399 \times 4483$
—→ This equation enables the computation of $\log(4483)$

page 370:

- $\Rightarrow 4483 \times 10^6 + 1 = 311 \times 2887 \times 4993$
—→ This equation enables the computation of $\log(4993)$
- $\Rightarrow 51 \times 10^7 - 1 = 23 \times 4993 \times 4441$
—→ This equation enables the computation of $\log(4441)$
- $\Rightarrow 659 \times 10^5 - 1 = 11 \times 19 \times 71 \times 4441$
—→ This equation enables the computation of $\log(4441)$
- $\Rightarrow 2645 \times 10^6 + 1 = 3^4 \times 7 \times 1049 \times 4447$
—→ This equation enables the computation of $\log(4447)$
- $\Rightarrow 1802 \times 10^6 - 1 = 29 \times 89 \times 157 \times 4447$
—→ This equation enables the computation of $\log(4447)$

page 371:

- $\Rightarrow 3304 \times 10^7 + 1 = 37 \times 439 \times 457 \times 4451$
—→ This equation enables the computation of $\log(4451)$
- $\Rightarrow 1147 \times 10^7 - 1 = 3 \times 431 \times 1993 \times 4451$
—→ This equation enables the computation of $\log(4451)$
- $\Rightarrow 776 \times 10^9 + 1 = 3 \times 37 \times 739 \times 1151 \times 8219$
—→ This equation enables the computation of $\log(8219)$
- $\Rightarrow 459 \times 10^8 - 1 = 7 \times 179 \times 8219 \times 4457$
—→ This equation enables the computation of $\log(4457)$
- $\Rightarrow 3747 \times 10^4 - 1 = 7 \times 1201 \times 4457$
—→ This equation enables the computation of $\log(4457)$

page 372:

- $\Rightarrow 4329 \times 10^6 - 1 = 677 \times 1427 \times 4481$
—→ This equation enables the computation of $\log(4481)$
- $\Rightarrow 2961 \times 10^5 - 1 = 13^2 \times 17 \times 23 \times 4481$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(4481)$
- ⇒ $1673 \times 10^6 + 1 = 3^4 \times 4597 \times 4493$
- This equation enables the computation of $\log(4493)$
- ⇒ $3251 \times 10^5 + 1 = 3 \times 89 \times 271 \times 4493$
- This equation enables the computation of $\log(4493)$
- ⇒ $3182 \times 10^8 - 1 = 7^3 \times 19 \times 31 \times 349 \times 4513$
- This equation enables the computation of $\log(4513)$

page 373:

- ⇒ $229 \times 10^7 - 1 = 3 \times 7 \times 73 \times 331 \times 4513$
- This equation enables the computation of $\log(4513)$
- ⇒ $177 \times 10^7 + 1 = 7^2 \times 11 \times 727 \times 4517$
- This equation enables the computation of $\log(4517)$
- ⇒ $4149 \times 10^5 + 1 = 31 \times 2963 \times 4517$
- This equation enables the computation of $\log(4517)$
- ⇒ $1934 \times 10^8 + 1 = 3^4 \times 13 \times 97 \times 419 \times 4519$
- This equation enables the computation of $\log(4519)$
- ⇒ $4387 \times 10^5 + 1 = 193 \times 503 \times 4519$
- This equation enables the computation of $\log(4519)$

page 374:

- ⇒ $1532 \times 10^6 - 1 = 17 \times 107 \times 163 \times 5167$
- This equation enables the computation of $\log(5167)$
- ⇒ $2947 \times 10^7 + 1 = 13 \times 97 \times 5167 \times 4523$
- This equation enables the computation of $\log(4523)$
- ⇒ $1576 \times 10^7 - 1 = 3^2 \times 191 \times 2027 \times 4523$
- This equation enables the computation of $\log(4523)$
- ⇒ $1459 \times 10^7 - 1 = 3^2 \times 109 \times 1871 \times 7949$
- This equation enables the computation of $\log(7949)$
- ⇒ $3616 \times 10^4 + 1 = 7949 \times 4549$
- This equation enables the computation of $\log(4549)$
- ⇒ $3091 \times 10^5 + 1 = 7 \times 17 \times 571 \times 4549$
- This equation enables the computation of $\log(4549)$

page 375:

- ⇒ $1507 \times 10^5 + 1 = 19 \times 37 \times 47 \times 4561$
- This equation enables the computation of $\log(4561)$
- ⇒ $3174 \times 10^4 - 1 = 6959 \times 4561$
- This equation enables the computation of $\log(4561)$
- ⇒ $735 \times 10^7 - 1 = 859 \times 1867 \times 4583$
- This equation enables the computation of $\log(4583)$
- ⇒ $4411 \times 10^5 + 1 = 109 \times 883 \times 4583$
- This equation enables the computation of $\log(4583)$

page 376:

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $1534 \times 10^6 + 1 = 31 \times 61 \times 97 \times 8363$
→ This equation enables the computation of $\log(8363)$
- ⇒ $149 \times 10^9 - 1 = 37 \times 67 \times 8363 \times 7187$
→ This equation enables the computation of $\log(7187)$
- ⇒ $526 \times 10^7 - 1 = 3 \times 53 \times 7187 \times 4603$
→ This equation enables the computation of $\log(4603)$
- ⇒ $5292 \times 10^8 - 1 = 11^2 \times 179 \times 3181 \times 7681$
→ This equation enables the computation of $\log(7681)$
- ⇒ $6834 \times 10^7 - 1 = 31 \times 37 \times 7681 \times 7757$
→ This equation enables the computation of $\log(7757)$
- ⇒ $868 \times 10^8 + 1 = 11 \times 13 \times 17 \times 7757 \times 4603$
→ This equation enables the computation of $\log(4603)$

page 377:

- ⇒ $3957 \times 10^7 + 1 = 7 \times 19 \times 139 \times 461 \times 4643$
→ This equation enables the computation of $\log(4643)$
- ⇒ $686 \times 10^7 - 1 = 257 \times 5749 \times 4643$
→ This equation enables the computation of $\log(4643)$
- ⇒ $3455 \times 10^6 + 1 = 3^6 \times 1019 \times 4651$
→ This equation enables the computation of $\log(4651)$
- ⇒ $1196 \times 10^6 - 1 = 137 \times 1877 \times 4651$
→ This equation enables the computation of $\log(4651)$
- ⇒ $2195 \times 10^6 + 1 = 3^2 \times 193 \times 271 \times 4663$
→ This equation enables the computation of $\log(4663)$

page 378:

- ⇒ $3298 \times 10^5 + 1 = 107 \times 661 \times 4663$
→ This equation enables the computation of $\log(4663)$
- ⇒ $291 \times 10^8 - 1 = 7^2 \times 167 \times 761 \times 4673$
→ This equation enables the computation of $\log(4673)$
- ⇒ $1763 \times 10^7 + 1 = 3^4 \times 47 \times 991 \times 4673$
→ This equation enables the computation of $\log(4673)$
- ⇒ $2779 \times 10^6 + 1 = 23 \times 43 \times 599 \times 4691$
→ This equation enables the computation of $\log(4691)$
- ⇒ $1912 \times 10^6 - 1 = 3 \times 7 \times 13 \times 1493 \times 4691$
→ This equation enables the computation of $\log(4691)$
- ⇒ $3647 \times 10^7 + 1 = 3 \times 643 \times 4003 \times 4723$
→ This equation enables the computation of $\log(4723)$

page 379:

- ⇒ $3694 \times 10^5 - 1 = 3 \times 29^2 \times 31 \times 4723$
→ This equation enables the computation of $\log(4723)$
- ⇒ $7525 \times 10^7 + 1 = 11 \times 137 \times 5023 \times 9941$
→ This equation enables the computation of $\log(9941)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- $\Rightarrow 4278 \times 10^6 - 1 = 7 \times 13 \times 9941 \times 4729$
—→ This equation enables the computation of $\log(4729)$
- $\Rightarrow 518 \times 10^7 + 1 = 3 \times 11 \times 19 \times 1747 \times 4729$
—→ This equation enables the computation of $\log(4729)$
- $\Rightarrow 951 \times 10^6 - 1 = 211 \times 769 \times 5861$
—→ This equation enables the computation of $\log(5861)$

page 380:

- $\Rightarrow 491 \times 10^7 + 1 = 3 \times 59 \times 5861 \times 4733$
—→ This equation enables the computation of $\log(4733)$
- $\Rightarrow 1273 \times 10^9 - 1 = 3 \times 7 \times 13 \times 31 \times 61 \times 521 \times 4733$
—→ This equation enables the computation of $\log(4733)$
- $\Rightarrow 5934 \times 10^5 + 1 = 19 \times 29 \times 131 \times 8221$
—→ This equation enables the computation of $\log(8221)$
- $\Rightarrow 2695 \times 10^6 - 1 = 3 \times 23 \times 8221 \times 4751$
—→ This equation enables the computation of $\log(4751)$
- $\Rightarrow 3195 \times 10^5 - 1 = 7 \times 13 \times 739 \times 4751$
—→ This equation enables the computation of $\log(4751)$

page 381:

- $\Rightarrow 944 \times 10^6 - 1 = 293 \times 677 \times 4759$
—→ This equation enables the computation of $\log(4759)$
- $\Rightarrow 4681 \times 10^5 - 1 = 3^3 \times 3643 \times 4759$
—→ This equation enables the computation of $\log(4759)$
- $\Rightarrow 3676 \times 10^7 - 1 = 3 \times 1009 \times 2539 \times 4783$
—→ This equation enables the computation of $\log(4783)$
- $\Rightarrow 1504 \times 10^6 + 1 = 7 \times 29 \times 1549 \times 4783$
—→ This equation enables the computation of $\log(4783)$
- $\Rightarrow 3311 \times 10^5 + 1 = 3^3 \times 2069 \times 5927$
—→ This equation enables the computation of $\log(5927)$

page 382:

- $\Rightarrow 1447 \times 10^6 - 1 = 3 \times 17 \times 5927 \times 4787$
—→ This equation enables the computation of $\log(4787)$
- $\Rightarrow 334 \times 10^7 + 1 = 13 \times 191 \times 281 \times 4787$
—→ This equation enables the computation of $\log(4787)$
- $\Rightarrow 489 \times 10^6 + 1 = 7 \times 29 \times 503 \times 4789$
—→ This equation enables the computation of $\log(4789)$
- $\Rightarrow 43 \times 10^8 - 1 = 3 \times 191 \times 1567 \times 4789$
—→ This equation enables the computation of $\log(4789)$
- $\Rightarrow 4627 \times 10^5 - 1 = 3^3 \times 17 \times 103 \times 9787$
—→ This equation enables the computation of $\log(9787)$

page 383:

- $\Rightarrow 516 \times 10^6 + 1 = 11 \times 9787 \times 4793$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(4793)$
- ⇒ $4277 \times 10^6 - 1 = 743 \times 1201 \times 4793$
- This equation enables the computation of $\log(4793)$
- ⇒ $2378 \times 10^7 + 1 = 3 \times 1009 \times 1637 \times 4799$
- This equation enables the computation of $\log(4799)$
- ⇒ $4584 \times 10^6 + 1 = 7 \times 61 \times 2237 \times 4799$
- This equation enables the computation of $\log(4799)$
- ⇒ $3493 \times 10^8 - 1 = 3^4 \times 223 \times 2089 \times 9257$
- This equation enables the computation of $\log(9257)$
- ⇒ $3111 \times 10^5 - 1 = 7 \times 9257 \times 4801$
- This equation enables the computation of $\log(4801)$

page 384:

- ⇒ $4632 \times 10^6 - 1 = 11 \times 139 \times 631 \times 4801$
- This equation enables the computation of $\log(4801)$
- ⇒ $1152 \times 10^6 + 1 = 19 \times 41 \times 307 \times 4817$
- This equation enables the computation of $\log(4817)$
- ⇒ $2931 \times 10^5 - 1 = 71 \times 857 \times 4817$
- This equation enables the computation of $\log(4817)$
- ⇒ $3861 \times 10^6 + 1 = 311 \times 2111 \times 5881$
- This equation enables the computation of $\log(5881)$
- ⇒ $2557 \times 10^5 - 1 = 3^2 \times 5881 \times 4831$
- This equation enables the computation of $\log(4831)$

page 385:

- ⇒ $3126 \times 10^6 + 1 = 17^2 \times 2239 \times 4831$
- This equation enables the computation of $\log(4831)$
- ⇒ $5161 \times 10^6 + 1 = 19 \times 31 \times 1063 \times 8243$
- This equation enables the computation of $\log(8243)$
- ⇒ $3082 \times 10^6 - 1 = 3 \times 13 \times 8243 \times 9587$
- This equation enables the computation of $\log(9587)$
- ⇒ $5444 \times 10^7 + 1 = 3^2 \times 101 \times 9587 \times 6247$
- This equation enables the computation of $\log(6247)$
- ⇒ $911 \times 10^5 + 1 = 3 \times 6247 \times 4861$
- This equation enables the computation of $\log(4861)$

page 386:

- ⇒ $395 \times 10^6 - 1 = 23 \times 3533 \times 4861$
- This equation enables the computation of $\log(4861)$
- ⇒ $71 \times 10^8 + 1 = 3^6 \times 1997 \times 4877$
- This equation enables the computation of $\log(4877)$
- ⇒ $2654 \times 10^6 - 1 = 7 \times 17^2 \times 269 \times 4877$
- This equation enables the computation of $\log(4877)$
- ⇒ $3631 \times 10^6 + 1 = 787 \times 941 \times 4903$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(4903)$
- ⇒ $1272 \times 10^6 - 1 = 61 \times 4253 \times 4903$
- This equation enables the computation of $\log(4903)$

page 387:

- ⇒ $294 \times 10^5 + 1 = 53 \times 113 \times 4909$
- This equation enables the computation of $\log(4909)$
- ⇒ $1969 \times 10^4 - 1 = 3 \times 7 \times 191 \times 4909$
- This equation enables the computation of $\log(4909)$
- ⇒ $1053 \times 10^7 + 1 = 23 \times 163 \times 571 \times 4919$
- This equation enables the computation of $\log(4919)$
- ⇒ $692 \times 10^6 + 1 = 3^2 \times 7^2 \times 11 \times 29 \times 4919$
- This equation enables the computation of $\log(4919)$
- ⇒ $893 \times 10^6 - 1 = 193 \times 857 \times 5399$
- This equation enables the computation of $\log(5399)$

page 388:

- ⇒ $5399 \times 10^7 + 1 = 3^2 \times 7 \times 17^2 \times 487 \times 6089$
- This equation enables the computation of $\log(6089)$
- ⇒ $811 \times 10^6 - 1 = 3^3 \times 6089 \times 4933$
- This equation enables the computation of $\log(4933)$
- ⇒ $2761 \times 10^4 + 1 = 29 \times 193 \times 4933$
- This equation enables the computation of $\log(4933)$
- ⇒ $3106 \times 10^6 - 1 = 3^6 \times 863 \times 4937$
- This equation enables the computation of $\log(4937)$
- ⇒ $3499 \times 10^5 + 1 = 11 \times 17 \times 379 \times 4937$
- This equation enables the computation of $\log(4937)$

page 389:

- ⇒ $4339 \times 10^6 + 1 = 7 \times 89 \times 1409 \times 4943$
- This equation enables the computation of $\log(4943)$
- ⇒ $3846 \times 10^5 + 1 = 29 \times 2683 \times 4943$
- This equation enables the computation of $\log(4943)$
- ⇒ $4463 \times 10^7 + 1 = 3^3 \times 67 \times 4967 \times 4967$
- This equation enables the computation of $\log(4967)$
- ⇒ $4894 \times 10^6 + 1 = 11^2 \times 17 \times 479 \times 4967$
- This equation enables the computation of $\log(4967)$
- ⇒ $1546 \times 10^6 + 1 = 7 \times 13^2 \times 263 \times 4969$
- This equation enables the computation of $\log(4969)$

page 390:

- ⇒ $4416 \times 10^5 - 1 = 181 \times 491 \times 4969$
- This equation enables the computation of $\log(4969)$
- ⇒ $2582 \times 10^7 + 1 = 3^2 \times 281 \times 2053 \times 4973$
- This equation enables the computation of $\log(4973)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $4577 \times 10^5 + 1 = 3 \times 11 \times 2789 \times 4973$
→ This equation enables the computation of $\log(4973)$
- ⇒ $1109 \times 10^6 + 1 = 3 \times 37 \times 1997 \times 5003$
→ This equation enables the computation of $\log(5003)$
- ⇒ $1084 \times 10^5 + 1 = 47 \times 461 \times 5003$
→ This equation enables the computation of $\log(5003)$

page 391:

- ⇒ $3865 \times 10^7 - 1 = 3 \times 13 \times 53 \times 3733 \times 5009$
→ This equation enables the computation of $\log(5009)$
- ⇒ $4202 \times 10^5 + 1 = 3^3 \times 13 \times 239 \times 5009$
→ This equation enables the computation of $\log(5009)$
- ⇒ $1729 \times 10^8 + 1 = 37 \times 719 \times 1297 \times 5011$
→ This equation enables the computation of $\log(5011)$
- ⇒ $2526 \times 10^6 + 1 = 7 \times 23 \times 31 \times 101 \times 5011$
→ This equation enables the computation of $\log(5011)$
- ⇒ $3345 \times 10^7 + 1 = 11^2 \times 229 \times 239 \times 5051$
→ This equation enables the computation of $\log(5051)$

page 392:

- ⇒ $1907 \times 10^6 - 1 = 19 \times 31 \times 641 \times 5051$
→ This equation enables the computation of $\log(5051)$
- ⇒ $5686 \times 10^5 - 1 = 3 \times 11 \times 2719 \times 6337$
→ This equation enables the computation of $\log(6337)$
- ⇒ $1451 \times 10^7 - 1 = 11 \times 41 \times 6337 \times 5077$
→ This equation enables the computation of $\log(5077)$
- ⇒ $3626 \times 10^7 + 1 = 3^6 \times 97 \times 101 \times 5077$
→ This equation enables the computation of $\log(5077)$
- ⇒ $5497 \times 10^7 + 1 = 7 \times 61 \times 113 \times 197 \times 5783$
→ This equation enables the computation of $\log(5783)$

page 393:

- ⇒ $1126 \times 10^6 - 1 = 3^2 \times 53 \times 431 \times 5477$
→ This equation enables the computation of $\log(5477)$
- ⇒ $5783 \times 10^5 - 1 = 17 \times 5477 \times 6211$
→ This equation enables the computation of $\log(6211)$
- ⇒ $8372 \times 10^8 - 1 = 11 \times 37^2 \times 6211 \times 8951$
→ This equation enables the computation of $\log(8951)$
- ⇒ $953 \times 10^9 + 1 = 3^2 \times 7 \times 277 \times 8951 \times 6101$
→ This equation enables the computation of $\log(6101)$
- ⇒ $3785 \times 10^7 + 1 = 3 \times 11 \times 37 \times 6101 \times 5081$
→ This equation enables the computation of $\log(5081)$

page 394:

- ⇒ $5066 \times 10^6 + 1 = 3^2 \times 19^2 \times 173 \times 9013$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(9013)$
- ⇒ $1296 \times 10^7 - 1 = 283 \times 9013 \times 5081$
- This equation enables the computation of $\log(5081)$
- ⇒ $3577 \times 10^7 - 1 = 3 \times 17 \times 67 \times 2053 \times 5099$
- This equation enables the computation of $\log(5099)$
- ⇒ $4329 \times 10^5 + 1 = 73 \times 1163 \times 5099$
- This equation enables the computation of $\log(5099)$
- ⇒ $2548 \times 10^7 - 1 = 3^2 \times 199 \times 2789 \times 5101$
- This equation enables the computation of $\log(5101)$
- ⇒ $4851 \times 10^5 - 1 = 61 \times 1559 \times 5101$
- This equation enables the computation of $\log(5101)$

page 395:

- ⇒ $4876 \times 10^6 + 1 = 19 \times 79 \times 401 \times 8101$
- This equation enables the computation of $\log(8101)$
- ⇒ $4373 \times 10^7 - 1 = 7 \times 151 \times 8101 \times 5107$
- This equation enables the computation of $\log(5107)$
- ⇒ $2874 \times 10^6 - 1 = 13 \times 73 \times 593 \times 5107$
- This equation enables the computation of $\log(5107)$
- ⇒ $4908 \times 10^6 + 1 = 431 \times 1523 \times 7477$
- This equation enables the computation of $\log(7477)$
- ⇒ $2569 \times 10^6 - 1 = 3 \times 17 \times 7477 \times 6737$
- This equation enables the computation of $\log(6737)$

page 396:

- ⇒ $4168 \times 10^6 + 1 = 11^2 \times 6737 \times 5113$
- This equation enables the computation of $\log(5113)$
- ⇒ $4337 \times 10^5 - 1 = 271 \times 313 \times 5113$
- This equation enables the computation of $\log(5113)$
- ⇒ $764 \times 10^7 + 1 = 3^3 \times 167 \times 331 \times 5119$
- This equation enables the computation of $\log(5119)$
- ⇒ $2521 \times 10^6 + 1 = 13 \times 43 \times 881 \times 5119$
- This equation enables the computation of $\log(5119)$
- ⇒ $1409 \times 10^7 - 1 = 31 \times 233 \times 379 \times 5147$
- This equation enables the computation of $\log(5147)$
- ⇒ $1351 \times 10^6 + 1 = 13 \times 61 \times 331 \times 5147$
- This equation enables the computation of $\log(5147)$

page 397:

- ⇒ $2933 \times 10^6 - 1 = 19 \times 29 \times 1033 \times 5153$
- This equation enables the computation of $\log(5153)$
- ⇒ $222 \times 10^7 + 1 = 43^2 \times 233 \times 5153$
- This equation enables the computation of $\log(5153)$
- ⇒ $4883 \times 10^7 - 1 = 11^2 \times 83 \times 937 \times 5189$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(5189)$
- ⇒ $4655 \times 10^5 + 1 = 3 \times 17 \times 1759 \times 5189$
- This equation enables the computation of $\log(5189)$
- ⇒ $3061 \times 10^5 - 1 = 3^3 \times 1187 \times 9551$
- This equation enables the computation of $\log(9551)$

page 398:

- ⇒ $649 \times 10^6 + 1 = 13 \times 9551 \times 5227$
- This equation enables the computation of $\log(5227)$
- ⇒ $686 \times 10^8 + 1 = 3 \times 13 \times 487 \times 691 \times 5227$
- This equation enables the computation of $\log(5227)$
- ⇒ $4136 \times 10^6 + 1 = 3 \times 7 \times 23 \times 1637 \times 5231$
- This equation enables the computation of $\log(5231)$
- ⇒ $1095 \times 10^6 - 1 = 353 \times 593 \times 5231$
- This equation enables the computation of $\log(5231)$
- ⇒ $776 \times 10^7 + 1 = 3 \times 13 \times 47 \times 809 \times 5233$
- This equation enables the computation of $\log(5233)$

page 399:

- ⇒ $2706 \times 10^6 - 1 = 367 \times 1409 \times 5233$
- This equation enables the computation of $\log(5233)$
- ⇒ $1373 \times 10^6 + 1 = 3 \times 281 \times 311 \times 5237$
- This equation enables the computation of $\log(5237)$
- ⇒ $3256 \times 10^5 + 1 = 79 \times 787 \times 5237$
- This equation enables the computation of $\log(5237)$
- ⇒ $1296 \times 10^6 + 1 = 181 \times 1361 \times 5261$
- This equation enables the computation of $\log(5261)$
- ⇒ $2823 \times 10^5 - 1 = 23 \times 2333 \times 5261$
- This equation enables the computation of $\log(5261)$

page 400:

- ⇒ $2189 \times 10^7 + 1 = 3 \times 383 \times 3613 \times 5273$
- This equation enables the computation of $\log(5273)$
- ⇒ $2707 \times 10^5 + 1 = 11 \times 13 \times 359 \times 5273$
- This equation enables the computation of $\log(5273)$
- ⇒ $3949 \times 10^8 + 1 = 13 \times 37^2 \times 59 \times 71 \times 5297$
- This equation enables the computation of $\log(5297)$
- ⇒ $2922 \times 10^6 + 1 = 17 \times 37 \times 877 \times 5297$
- This equation enables the computation of $\log(5297)$
- ⇒ $3671 \times 10^8 + 1 = 3^2 \times 7 \times 953 \times 1153 \times 5303$
- This equation enables the computation of $\log(5303)$

page 401:

- ⇒ $1193 \times 10^6 + 1 = 3 \times 31 \times 41 \times 59 \times 5303$
- This equation enables the computation of $\log(5303)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $1049 \times 10^6 + 1 = 3 \times 7 \times 97^2 \times 5309$
→ This equation enables the computation of $\log(5309)$
- ⇒ $5181 \times 10^5 + 1 = 23 \times 4243 \times 5309$
→ This equation enables the computation of $\log(5309)$
- ⇒ $1704 \times 10^8 + 1 = 7 \times 11 \times 29 \times 41 \times 349 \times 5333$
→ This equation enables the computation of $\log(5333)$
- ⇒ $2773 \times 10^5 + 1 = 11 \times 29 \times 163 \times 5333$
→ This equation enables the computation of $\log(5333)$

page 402:

- ⇒ $4109 \times 10^7 + 1 = 3 \times 19 \times 31 \times 4349 \times 5347$
→ This equation enables the computation of $\log(5347)$
- ⇒ $1686 \times 10^6 - 1 = 29 \times 83 \times 131 \times 5347$
→ This equation enables the computation of $\log(5347)$
- ⇒ $5309 \times 10^6 + 1 = 3^2 \times 23 \times 4793 \times 5351$
→ This equation enables the computation of $\log(5351)$
- ⇒ $42 \times 10^6 - 1 = 47 \times 167 \times 5351$
→ This equation enables the computation of $\log(5351)$
- ⇒ $2872 \times 10^8 - 1 = 3^3 \times 11^2 \times 17 \times 31^2 \times 5381$
→ This equation enables the computation of $\log(5381)$

page 403:

- ⇒ $3566 \times 10^7 + 1 = 3 \times 1187 \times 1861 \times 5381$
→ This equation enables the computation of $\log(5381)$
- ⇒ $1088 \times 10^7 - 1 = 11 \times 89 \times 2063 \times 5387$
→ This equation enables the computation of $\log(5387)$
- ⇒ $5281 \times 10^6 + 1 = 577 \times 1699 \times 5387$
→ This equation enables the computation of $\log(5387)$
- ⇒ $4453 \times 10^4 + 1 = 23 \times 359 \times 5393$
→ This equation enables the computation of $\log(5393)$
- ⇒ $94 \times 10^5 - 1 = 3 \times 7 \times 83 \times 5393$
→ This equation enables the computation of $\log(5393)$

page 404:

- ⇒ $4069 \times 10^6 + 1 = 11 \times 37 \times 43^2 \times 5407$
→ This equation enables the computation of $\log(5407)$
- ⇒ $1338 \times 10^6 - 1 = 7 \times 23 \times 29 \times 53 \times 5407$
→ This equation enables the computation of $\log(5407)$
- ⇒ $2092 \times 10^6 + 1 = 7 \times 13 \times 31 \times 137 \times 5413$
→ This equation enables the computation of $\log(5413)$
- ⇒ $3506 \times 10^4 + 1 = 3 \times 17 \times 127 \times 5413$
→ This equation enables the computation of $\log(5413)$
- ⇒ $7351 \times 10^6 + 1 = 191 \times 4273 \times 9007$
→ This equation enables the computation of $\log(9007)$

page 405:

- ⇒ $1967 \times 10^7 - 1 = 13 \times 31 \times 9007 \times 5419$
→ This equation enables the computation of $\log(5419)$
- ⇒ $1429 \times 10^8 + 1 = 11 \times 17 \times 83 \times 1699 \times 5419$
→ This equation enables the computation of $\log(5419)$
- ⇒ $373 \times 10^8 + 1 = 11 \times 499 \times 1163 \times 5843$
→ This equation enables the computation of $\log(5843)$
- ⇒ $952 \times 10^5 - 1 = 3 \times 5843 \times 5431$
→ This equation enables the computation of $\log(5431)$
- ⇒ $1342 \times 10^4 + 1 = 7 \times 353 \times 5431$
→ This equation enables the computation of $\log(5431)$

page 406:

- ⇒ $2416 \times 10^7 - 1 = 3 \times 149 \times 9941 \times 5437$
→ This equation enables the computation of $\log(5437)$
- ⇒ $2412 \times 10^6 - 1 = 271 \times 1637 \times 5437$
→ This equation enables the computation of $\log(5437)$
- ⇒ $6368 \times 10^7 + 1 = 3 \times 17 \times 29 \times 4421 \times 9739$
→ This equation enables the computation of $\log(9739)$
- ⇒ $5246 \times 10^6 + 1 = 3^2 \times 11 \times 9739 \times 5441$
→ This equation enables the computation of $\log(5441)$
- ⇒ $1062 \times 10^6 + 1 = 311 \times 479 \times 7129$
→ This equation enables the computation of $\log(7129)$
- ⇒ $3491 \times 10^5 + 1 = 3^2 \times 7129 \times 5441$
→ This equation enables the computation of $\log(5441)$

page 407:

- ⇒ $5263 \times 10^5 - 1 = 3 \times 167 \times 193 \times 5443$
→ This equation enables the computation of $\log(5443)$
- ⇒ $18 \times 10^6 + 1 = 3307 \times 5443$
→ This equation enables the computation of $\log(5443)$
- ⇒ $4314 \times 10^7 + 1 = 7 \times 1031 \times 1097 \times 5449$
→ This equation enables the computation of $\log(5449)$
- ⇒ $1135 \times 10^7 - 1 = 3^2 \times 13 \times 19 \times 937 \times 5449$
→ This equation enables the computation of $\log(5449)$
- ⇒ $1628 \times 10^6 - 1 = 29 \times 31 \times 331 \times 5471$
→ This equation enables the computation of $\log(5471)$

page 408:

- ⇒ $5338 \times 10^5 - 1 = 3^2 \times 37 \times 293 \times 5471$
→ This equation enables the computation of $\log(5471)$
- ⇒ $2258 \times 10^6 + 1 = 3^2 \times 29 \times 1579 \times 5479$
→ This equation enables the computation of $\log(5479)$
- ⇒ $4318 \times 10^4 - 1 = 3 \times 37 \times 71 \times 5479$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(5479)$
- ⇒ $4636 \times 10^7 + 1 = 7^2 \times 31 \times 37 \times 101 \times 8167$
- This equation enables the computation of $\log(8167)$
- ⇒ $2642 \times 10^6 - 1 = 59 \times 8167 \times 5483$
- This equation enables the computation of $\log(5483)$

page 409:

- ⇒ $995 \times 10^5 + 1 = 3 \times 23 \times 263 \times 5483$
- This equation enables the computation of $\log(5483)$
- ⇒ $4381 \times 10^7 - 1 = 3 \times 67 \times 89 \times 367 \times 6673$
- This equation enables the computation of $\log(6673)$
- ⇒ $2901 \times 10^6 + 1 = 79 \times 6673 \times 5503$
- This equation enables the computation of $\log(5503)$
- ⇒ $2602 \times 10^6 - 1 = 3^2 \times 107 \times 491 \times 5503$
- This equation enables the computation of $\log(5503)$
- ⇒ $4749 \times 10^6 - 1 = 61 \times 67 \times 211 \times 5507$
- This equation enables the computation of $\log(5507)$

page 410:

- ⇒ $758 \times 10^6 + 1 = 3 \times 11 \times 43 \times 97 \times 5507$
- This equation enables the computation of $\log(5507)$
- ⇒ $451 \times 10^7 + 1 = 13 \times 31 \times 2027 \times 5521$
- This equation enables the computation of $\log(5521)$
- ⇒ $4589 \times 10^5 - 1 = 43 \times 1933 \times 5521$
- This equation enables the computation of $\log(5521)$
- ⇒ $463 \times 10^5 + 1 = 11 \times 761 \times 5531$
- This equation enables the computation of $\log(5531)$
- ⇒ $901 \times 10^4 - 1 = 3^2 \times 181 \times 5531$
- This equation enables the computation of $\log(5531)$

page 411:

- ⇒ $2366 \times 10^7 + 1 = 3^2 \times 11 \times 29 \times 1483 \times 5557$
- This equation enables the computation of $\log(5557)$
- ⇒ $1432 \times 10^6 + 1 = 439 \times 587 \times 5557$
- This equation enables the computation of $\log(5557)$
- ⇒ $4135 \times 10^7 - 1 = 3 \times 7^2 \times 11 \times 3823 \times 6689$
- This equation enables the computation of $\log(6689)$
- ⇒ $5491 \times 10^4 + 1 = 6689 \times 8209$
- This equation enables the computation of $\log(8209)$
- ⇒ $137 \times 10^6 + 1 = 3 \times 8209 \times 5563$
- This equation enables the computation of $\log(5563)$

page 412:

- ⇒ $4193 \times 10^5 - 1 = 19 \times 3967 \times 5563$
- This equation enables the computation of $\log(5563)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $2469 \times 10^7 - 1 = 7^2 \times 173 \times 523 \times 5569$
→ This equation enables the computation of $\log(5569)$
- ⇒ $1864 \times 10^5 - 1 = 3^2 \times 3719 \times 5569$
→ This equation enables the computation of $\log(5569)$
- ⇒ $3626 \times 10^6 + 1 = 3^2 \times 13 \times 67 \times 83 \times 5573$
→ This equation enables the computation of $\log(5573)$
- ⇒ $1947 \times 10^6 - 1 = 7 \times 29 \times 1721 \times 5573$
→ This equation enables the computation of $\log(5573)$

page 413:

- ⇒ $998 \times 10^6 + 1 = 3^3 \times 37 \times 179 \times 5581$
→ This equation enables the computation of $\log(5581)$
- ⇒ $4399 \times 10^5 + 1 = 23^2 \times 149 \times 5581$
→ This equation enables the computation of $\log(5581)$
- ⇒ $4421 \times 10^8 + 1 = 3 \times 11 \times 17 \times 59 \times 2389 \times 5591$
→ This equation enables the computation of $\log(5591)$
- ⇒ $411 \times 10^6 + 1 = 19 \times 53 \times 73 \times 5591$
→ This equation enables the computation of $\log(5591)$
- ⇒ $495 \times 10^7 - 1 = 7 \times 67 \times 1877 \times 5623$
→ This equation enables the computation of $\log(5623)$

page 414:

- ⇒ $4516 \times 10^5 - 1 = 3 \times 19 \times 1409 \times 5623$
→ This equation enables the computation of $\log(5623)$
- ⇒ $835 \times 10^7 + 1 = 7 \times 199 \times 1063 \times 5639$
→ This equation enables the computation of $\log(5639)$
- ⇒ $2928 \times 10^6 - 1 = 53 \times 97 \times 101 \times 5639$
→ This equation enables the computation of $\log(5639)$
- ⇒ $824 \times 10^7 - 1 = 7 \times 11 \times 29 \times 653 \times 5651$
→ This equation enables the computation of $\log(5651)$
- ⇒ $3286 \times 10^5 - 1 = 3^2 \times 7 \times 13 \times 71 \times 5651$
→ This equation enables the computation of $\log(5651)$
- ⇒ $5293 \times 10^6 + 1 = 41^2 \times 557 \times 5653$
→ This equation enables the computation of $\log(5653)$

page 415:

- ⇒ $36 \times 10^7 - 1 = 43 \times 1481 \times 5653$
→ This equation enables the computation of $\log(5653)$
- ⇒ $3812 \times 10^6 + 1 = 3 \times 19 \times 47 \times 251 \times 5669$
→ This equation enables the computation of $\log(5669)$
- ⇒ $4106 \times 10^5 + 1 = 3 \times 7 \times 3449 \times 5669$
→ This equation enables the computation of $\log(5669)$
- ⇒ $4071 \times 10^6 + 1 = 269 \times 2663 \times 5683$
→ This equation enables the computation of $\log(5683)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\Rightarrow 929 \times 10^5 + 1 = 3 \times 5449 \times 5683$$

→ This equation enables the computation of $\log(5683)$

page 416:

$$\Rightarrow 429 \times 10^7 + 1 = 7 \times 83 \times 1297 \times 5693$$

→ This equation enables the computation of $\log(5693)$

$$\Rightarrow 1403 \times 10^6 - 1 = 59 \times 4177 \times 5693$$

→ This equation enables the computation of $\log(5693)$

$$\Rightarrow 294 \times 10^7 - 1 = 43 \times 67 \times 179 \times 5701$$

→ This equation enables the computation of $\log(5701)$

$$\Rightarrow 895 \times 10^5 - 1 = 3 \times 5233 \times 5701$$

→ This equation enables the computation of $\log(5701)$

$$\Rightarrow 1479 \times 10^8 + 1 = 13^2 \times 293 \times 523 \times 5711$$

→ This equation enables the computation of $\log(5711)$

page 417:

$$\Rightarrow 5125 \times 10^6 + 1 = 11 \times 23 \times 3547 \times 5711$$

→ This equation enables the computation of $\log(5711)$

$$\Rightarrow 2609 \times 10^7 + 1 = 3^2 \times 13 \times 47 \times 827 \times 5737$$

→ This equation enables the computation of $\log(5737)$

$$\Rightarrow 2595 \times 10^6 - 1 = 199 \times 2273 \times 5737$$

→ This equation enables the computation of $\log(5737)$

$$\Rightarrow 447 \times 10^6 + 1 = 7^3 \times 227 \times 5741$$

→ This equation enables the computation of $\log(5741)$

$$\Rightarrow 4513 \times 10^4 + 1 = 7 \times 1123 \times 5741$$

→ This equation enables the computation of $\log(5741)$

page 418:

$$\Rightarrow 3894 \times 10^6 + 1 = 67 \times 89 \times 113 \times 5779$$

→ This equation enables the computation of $\log(5779)$

$$\Rightarrow 1513 \times 10^5 - 1 = 3^2 \times 2909 \times 5779$$

→ This equation enables the computation of $\log(5779)$

$$\Rightarrow 4546 \times 10^8 - 1 = 3^5 \times 31 \times 101 \times 103 \times 5801$$

→ This equation enables the computation of $\log(5801)$

$$\Rightarrow 3679 \times 10^6 + 1 = 19 \times 29 \times 1151 \times 5801$$

→ This equation enables the computation of $\log(5801)$

$$\Rightarrow 4121 \times 10^7 - 1 = 7 \times 17 \times 43 \times 1151 \times 6997$$

→ This equation enables the computation of $\log(6997)$

page 419:

$$\Rightarrow 772 \times 10^6 + 1 = 19 \times 6997 \times 5807$$

→ This equation enables the computation of $\log(5807)$

$$\Rightarrow 3407 \times 10^7 - 1 = 7 \times 17 \times 47 \times 1049 \times 5807$$

→ This equation enables the computation of $\log(5807)$

$$\Rightarrow 1209 \times 10^6 + 1 = 11 \times 19 \times 863 \times 6703$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(6703)$
- ⇒ $5494 \times 10^6 - 1 = 3 \times 47 \times 6703 \times 5813$
- This equation enables the computation of $\log(5813)$
- ⇒ $2623 \times 10^5 - 1 = 3 \times 13^2 \times 89 \times 5813$
- This equation enables the computation of $\log(5813)$

page 420:

- ⇒ $5273 \times 10^7 + 1 = 3^3 \times 7^2 \times 41 \times 167 \times 5821$
- This equation enables the computation of $\log(5821)$
- ⇒ $548 \times 10^7 - 1 = 229 \times 4111 \times 5821$
- This equation enables the computation of $\log(5821)$
- ⇒ $915 \times 10^8 + 1 = 37 \times 389 \times 1091 \times 5827$
- This equation enables the computation of $\log(5827)$
- ⇒ $3323 \times 10^7 + 1 = 3 \times 11 \times 29 \times 59 \times 101 \times 5827$
- This equation enables the computation of $\log(5827)$
- ⇒ $1434 \times 10^5 + 1 = 41 \times 599 \times 5839$
- This equation enables the computation of $\log(5839)$
- ⇒ $3177 \times 10^4 - 1 = 5441 \times 5839$
- This equation enables the computation of $\log(5839)$

page 421:

- ⇒ $5617 \times 10^7 - 1 = 3^2 \times 17 \times 23 \times 2729 \times 5849$
- This equation enables the computation of $\log(5849)$
- ⇒ $3529 \times 10^6 - 1 = 3^2 \times 7 \times 61 \times 157 \times 5849$
- This equation enables the computation of $\log(5849)$
- ⇒ $1999 \times 10^6 + 1 = 31 \times 103 \times 107 \times 5851$
- This equation enables the computation of $\log(5851)$
- ⇒ $3414 \times 10^5 - 1 = 19 \times 37 \times 83 \times 5851$
- This equation enables the computation of $\log(5851)$
- ⇒ $6567 \times 10^6 + 1 = 19 \times 131 \times 283 \times 9323$
- This equation enables the computation of $\log(9323)$

page 422:

- ⇒ $1589 \times 10^7 + 1 = 3 \times 97 \times 9323 \times 5857$
- This equation enables the computation of $\log(5857)$
- ⇒ $4176 \times 10^6 + 1 = 263 \times 2711 \times 5857$
- This equation enables the computation of $\log(5857)$
- ⇒ $5147 \times 10^7 - 1 = 11 \times 601 \times 1327 \times 5867$
- This equation enables the computation of $\log(5867)$
- ⇒ $1333 \times 10^6 + 1 = 127 \times 1789 \times 5867$
- This equation enables the computation of $\log(5867)$
- ⇒ $3653 \times 10^7 + 1 = 3^3 \times 11 \times 19 \times 1103 \times 5869$
- This equation enables the computation of $\log(5869)$
- ⇒ $1316 \times 10^6 + 1 = 3 \times 41 \times 1823 \times 5869$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(5869)$

page 423:

$$\Rightarrow 5144 \times 10^6 + 1 = 3 \times 7 \times 43 \times 641 \times 8887$$

→ This equation enables the computation of $\log(8887)$

$$\Rightarrow 1263 \times 10^7 - 1 = 241 \times 8887 \times 5897$$

→ This equation enables the computation of $\log(5897)$

$$\Rightarrow 3434 \times 10^5 + 1 = 3 \times 7 \times 47 \times 59 \times 5897$$

→ This equation enables the computation of $\log(5897)$

$$\Rightarrow 2859 \times 10^5 - 1 = 7 \times 11 \times 17 \times 37 \times 5903$$

→ This equation enables the computation of $\log(5903)$

$$\Rightarrow 4418 \times 10^6 - 1 = 7 \times 31 \times 3449 \times 5903$$

→ This equation enables the computation of $\log(5903)$

page 424:

$$\Rightarrow 5917 \times 10^6 + 1 = 11 \times 197 \times 461 \times 5923$$

→ This equation enables the computation of $\log(5923)$

$$\Rightarrow 5863 \times 10^5 + 1 = 7 \times 79 \times 179 \times 5923$$

→ This equation enables the computation of $\log(5923)$

$$\Rightarrow 1431 \times 10^6 - 1 = 11 \times 13 \times 41^2 \times 5953$$

→ This equation enables the computation of $\log(5953)$

$$\Rightarrow 2404 \times 10^5 - 1 = 3^2 \times 7 \times 641 \times 5953$$

→ This equation enables the computation of $\log(5953)$

$$\Rightarrow 1216 \times 10^6 - 1 = 3^3 \times 6689 \times 6733$$

→ This equation enables the computation of $\log(6733)$

page 425:

$$\Rightarrow 5517 \times 10^6 + 1 = 137 \times 6733 \times 5981$$

→ This equation enables the computation of $\log(5981)$

$$\Rightarrow 464 \times 10^6 - 1 = 23 \times 3373 \times 5981$$

→ This equation enables the computation of $\log(5981)$

$$\Rightarrow 1495 \times 10^7 - 1 = 3^2 \times 11^2 \times 2293 \times 5987$$

→ This equation enables the computation of $\log(5987)$

$$\Rightarrow 4237 \times 10^4 - 1 = 3 \times 7 \times 337 \times 5987$$

→ This equation enables the computation of $\log(5987)$

page 426:

$$\Rightarrow 5716 \times 10^7 - 1 = 3^3 \times 89 \times 3469 \times 6857$$

→ This equation enables the computation of $\log(6857)$

$$\Rightarrow 4119 \times 10^4 - 1 = 6857 \times 6007$$

→ This equation enables the computation of $\log(6007)$

$$\Rightarrow 3793 \times 10^5 + 1 = 233 \times 271 \times 6007$$

→ This equation enables the computation of $\log(6007)$

$$\Rightarrow 467 \times 10^7 - 1 = 7 \times 41 \times 2707 \times 6011$$

→ This equation enables the computation of $\log(6011)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $1341 \times 10^6 + 1 = 11 \times 17 \times 1193 \times 6011$
→ This equation enables the computation of $\log(6011)$
- ⇒ $4435 \times 10^6 + 1 = 17 \times 23 \times 1877 \times 6043$
→ This equation enables the computation of $\log(6043)$

page 427:

- ⇒ $2049 \times 10^5 + 1 = 41 \times 827 \times 6043$
→ This equation enables the computation of $\log(6043)$
- ⇒ $588 \times 10^7 + 1 = 17 \times 47 \times 1217 \times 6047$
→ This equation enables the computation of $\log(6047)$
- ⇒ $4606 \times 10^4 - 1 = 3 \times 2539 \times 6047$
→ This equation enables the computation of $\log(6047)$
- ⇒ $706 \times 10^6 - 1 = 3 \times 101 \times 251 \times 9283$
→ This equation enables the computation of $\log(9283)$
- ⇒ $5619 \times 10^4 - 1 = 9283 \times 6053$
→ This equation enables the computation of $\log(6053)$

page 428:

- ⇒ $713 \times 10^8 - 1 = 17 \times 37 \times 61 \times 307 \times 6053$
→ This equation enables the computation of $\log(6053)$
- ⇒ $5864 \times 10^7 + 1 = 3 \times 11 \times 229 \times 1279 \times 6067$
→ This equation enables the computation of $\log(6067)$
- ⇒ $4037 \times 10^6 + 1 = 3 \times 293 \times 757 \times 6067$
→ This equation enables the computation of $\log(6067)$
- ⇒ $5093 \times 10^5 - 1 = 13 \times 6451 \times 6073$
→ This equation enables the computation of $\log(6073)$
- ⇒ $98 \times 10^6 + 1 = 3^2 \times 11 \times 163 \times 6073$
→ This equation enables the computation of $\log(6073)$

page 429:

- ⇒ $1486 \times 10^7 - 1 = 3^2 \times 13 \times 17 \times 1229 \times 6079$
→ This equation enables the computation of $\log(6079)$
- ⇒ $3377 \times 10^6 + 1 = 3 \times 23 \times 83 \times 97 \times 6079$
→ This equation enables the computation of $\log(6079)$
- ⇒ $4489 \times 10^6 - 1 = 3 \times 11 \times 23 \times 971 \times 6091$
→ This equation enables the computation of $\log(6091)$
- ⇒ $3838 \times 10^5 + 1 = 13 \times 37 \times 131 \times 6091$
→ This equation enables the computation of $\log(6091)$
- ⇒ $6794 \times 10^8 + 1 = 3^4 \times 997 \times 1097 \times 7669$
→ This equation enables the computation of $\log(7669)$

page 430:

- ⇒ $3141 \times 10^6 - 1 = 67 \times 7669 \times 6113$
→ This equation enables the computation of $\log(6113)$
- ⇒ $5268 \times 10^5 + 1 = 7 \times 13 \times 947 \times 6113$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(6113)$
- ⇒ $1685 \times 10^7 + 1 = 3 \times 751 \times 1193 \times 6269$
- This equation enables the computation of $\log(6269)$
- ⇒ $1957 \times 10^6 - 1 = 3 \times 17 \times 6269 \times 6121$
- This equation enables the computation of $\log(6121)$
- ⇒ $4164 \times 10^6 + 1 = 7 \times 157 \times 619 \times 6121$
- This equation enables the computation of $\log(6121)$
- ⇒ $2749 \times 10^7 + 1 = 37 \times 179 \times 677 \times 6131$
- This equation enables the computation of $\log(6131)$

page 431:

- ⇒ $3165 \times 10^6 - 1 = 7 \times 29 \times 2543 \times 6131$
- This equation enables the computation of $\log(6131)$
- ⇒ $4509 \times 10^6 - 1 = 7 \times 127 \times 827 \times 6133$
- This equation enables the computation of $\log(6133)$
- ⇒ $2159 \times 10^5 - 1 = 7 \times 47 \times 107 \times 6133$
- This equation enables the computation of $\log(6133)$
- ⇒ $1849 \times 10^6 - 1 = 3 \times 7 \times 11 \times 1303 \times 6143$
- This equation enables the computation of $\log(6143)$
- ⇒ $6082 \times 10^5 + 1 = 181 \times 547 \times 6143$
- This equation enables the computation of $\log(6143)$

page 432:

- ⇒ $4974 \times 10^6 - 1 = 449 \times 1801 \times 6151$
- This equation enables the computation of $\log(6151)$
- ⇒ $1177 \times 10^6 + 1 = 179 \times 1069 \times 6151$
- This equation enables the computation of $\log(6151)$
- ⇒ $4256 \times 10^9 - 1 = 11^2 \times 37 \times 73 \times 2113 \times 6163$
- This equation enables the computation of $\log(6163)$
- ⇒ $353 \times 10^7 - 1 = 419 \times 1367 \times 6163$
- This equation enables the computation of $\log(6163)$
- ⇒ $4792 \times 10^8 - 1 = 3 \times 7 \times 29 \times 199 \times 467 \times 8467$
- This equation enables the computation of $\log(8467)$

page 433:

- ⇒ $5247 \times 10^4 - 1 = 8467 \times 6197$
- This equation enables the computation of $\log(6197)$
- ⇒ $3108 \times 10^6 + 1 = 449 \times 1117 \times 6197$
- This equation enables the computation of $\log(6197)$
- ⇒ $3433 \times 10^6 + 1 = 317 \times 1747 \times 6199$
- This equation enables the computation of $\log(6199)$
- ⇒ $3335 \times 10^5 + 1 = 3 \times 79 \times 227 \times 6199$
- This equation enables the computation of $\log(6199)$
- ⇒ $3272 \times 10^7 + 1 = 3 \times 13 \times 31 \times 4363 \times 6203$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(6203)$

page 434:

$$\Rightarrow 2931 \times 10^7 - 1 = 7 \times 17 \times 59 \times 673 \times 6203$$

→ This equation enables the computation of $\log(6203)$

$$\Rightarrow 2132 \times 10^6 - 1 = 71 \times 3089 \times 9721$$

→ This equation enables the computation of $\log(9721)$

$$\Rightarrow 4303 \times 10^8 - 1 = 3^6 \times 19^2 \times 263 \times 6217$$

→ This equation enables the computation of $\log(6217)$

$$\Rightarrow 1052 \times 10^9 - 1 = 13^2 \times 103 \times 9721 \times 6217$$

→ This equation enables the computation of $\log(6217)$

$$\Rightarrow 1365 \times 10^7 + 1 = 11 \times 151 \times 1321 \times 6221$$

→ This equation enables the computation of $\log(6221)$

$$\Rightarrow 1208 \times 10^6 + 1 = 3 \times 13^2 \times 383 \times 6221$$

→ This equation enables the computation of $\log(6221)$

page 435:

$$\Rightarrow 4168 \times 10^8 + 1 = 7^2 \times 11 \times 83 \times 1489 \times 6257$$

→ This equation enables the computation of $\log(6257)$

$$\Rightarrow 2419 \times 10^6 - 1 = 3 \times 13 \times 23 \times 431 \times 6257$$

→ This equation enables the computation of $\log(6257)$

$$\Rightarrow 1685 \times 10^7 + 1 = 3 \times 751 \times 1193 \times 6269$$

→ This equation enables the computation of $\log(6269)$

$$\Rightarrow 2109 \times 10^5 + 1 = 13^2 \times 199 \times 6271$$

→ This equation enables the computation of $\log(6271)$

$$\Rightarrow 3994 \times 10^4 - 1 = 3 \times 11 \times 193 \times 6271$$

→ This equation enables the computation of $\log(6271)$

page 436:

$$\Rightarrow 4901 \times 10^6 - 1 = 7 \times 71 \times 1571 \times 6277$$

→ This equation enables the computation of $\log(6277)$

$$\Rightarrow 1376 \times 10^6 + 1 = 3^3 \times 23 \times 353 \times 6277$$

→ This equation enables the computation of $\log(6277)$

$$\Rightarrow 406 \times 10^7 - 1 = 3^2 \times 11^2 \times 593 \times 6287$$

→ This equation enables the computation of $\log(6287)$

$$\Rightarrow 3409 \times 10^5 + 1 = 13 \times 43 \times 97 \times 6287$$

→ This equation enables the computation of $\log(6287)$

$$\Rightarrow 3363 \times 10^7 + 1 = 13 \times 293 \times 1399 \times 6311$$

→ This equation enables the computation of $\log(6311)$

page 437:

$$\Rightarrow 4236 \times 10^6 - 1 = 7 \times 11 \times 23 \times 379 \times 6311$$

→ This equation enables the computation of $\log(6311)$

$$\Rightarrow 4629 \times 10^5 + 1 = 23 \times 29 \times 109 \times 6367$$

→ This equation enables the computation of $\log(6367)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $2373 \times 10^6 + 1 = 59 \times 6367 \times 6317$
→ This equation enables the computation of $\log(6317)$
- ⇒ $1538 \times 10^5 - 1 = 97 \times 251 \times 6317$
→ This equation enables the computation of $\log(6317)$
- ⇒ $6251 \times 10^6 - 1 = 43 \times 83 \times 277 \times 6323$
→ This equation enables the computation of $\log(6323)$
- ⇒ $72 \times 10^6 + 1 = 59 \times 193 \times 6323$
→ This equation enables the computation of $\log(6323)$

page 438:

- ⇒ $3719 \times 10^5 - 1 = 193 \times 223 \times 8641$
→ This equation enables the computation of $\log(8641)$
- ⇒ $4922 \times 10^5 + 1 = 3^2 \times 8641 \times 6329$
→ This equation enables the computation of $\log(6329)$
- ⇒ $1758 \times 10^6 + 1 = 89 \times 3121 \times 6329$
→ This equation enables the computation of $\log(6329)$
- ⇒ $879 \times 10^8 - 1 = 7^2 \times 41 \times 71 \times 97 \times 6353$
→ This equation enables the computation of $\log(6353)$
- ⇒ $2437 \times 10^7 - 1 = 3 \times 139 \times 9199 \times 6353$
→ This equation enables the computation of $\log(6353)$

page 439:

- ⇒ $938 \times 10^7 - 1 = 853 \times 1459 \times 7537$
→ This equation enables the computation of $\log(7537)$
- ⇒ $3356 \times 10^5 - 1 = 7 \times 7537 \times 6361$
→ This equation enables the computation of $\log(6361)$
- ⇒ $3005 \times 10^5 + 1 = 3^2 \times 29 \times 181 \times 6361$
→ This equation enables the computation of $\log(6361)$
- ⇒ $507 \times 10^8 + 1 = 7 \times 31 \times 61 \times 601 \times 6373$
→ This equation enables the computation of $\log(6373)$
- ⇒ $3533 \times 10^5 + 1 = 3 \times 17 \times 1087 \times 6373$
→ This equation enables the computation of $\log(6373)$

page 440:

- ⇒ $6812 \times 10^6 - 1 = 7 \times 23 \times 5861 \times 7219$
→ This equation enables the computation of $\log(7219)$
- ⇒ $4605 \times 10^4 + 1 = 7219 \times 6379$
→ This equation enables the computation of $\log(6379)$
- ⇒ $2729 \times 10^5 - 1 = 179 \times 239 \times 6379$
→ This equation enables the computation of $\log(6379)$
- ⇒ $2784 \times 10^7 + 1 = 11 \times 491 \times 683 \times 7547$
→ This equation enables the computation of $\log(7547)$
- ⇒ $1231 \times 10^8 - 1 = 3 \times 23 \times 37 \times 7547 \times 6389$
→ This equation enables the computation of $\log(6389)$

page 441:

- ⇒ $5158 \times 10^8 + 1 = 11 \times 13 \times 199 \times 2837 \times 6389$
→ This equation enables the computation of $\log(6389)$
- ⇒ $358 \times 10^9 + 1 = 7^2 \times 727 \times 1571 \times 6397$
→ This equation enables the computation of $\log(6397)$
- ⇒ $6165 \times 10^6 + 1 = 823 \times 1171 \times 6397$
→ This equation enables the computation of $\log(6397)$
- ⇒ $4379 \times 10^6 + 1 = 3 \times 59 \times 3853 \times 6421$
→ This equation enables the computation of $\log(6421)$
- ⇒ $2042 \times 10^6 - 1 = 13 \times 17 \times 1439 \times 6421$
→ This equation enables the computation of $\log(6421)$

page 442:

- ⇒ $78 \times 10^7 + 1 = 11^2 \times 17 \times 59 \times 6427$
→ This equation enables the computation of $\log(6427)$
- ⇒ $5054 \times 10^5 - 1 = 13 \times 23 \times 263 \times 6427$
→ This equation enables the computation of $\log(6427)$
- ⇒ $5492 \times 10^7 + 1 = 3 \times 23 \times 83 \times 1487 \times 6449$
→ This equation enables the computation of $\log(6449)$
- ⇒ $957 \times 10^7 - 1 = 7 \times 239 \times 887 \times 6449$
→ This equation enables the computation of $\log(6449)$
- ⇒ $359 \times 10^{10} - 1 = 7 \times 19 \times 37 \times 43 \times 2621 \times 6473$
→ This equation enables the computation of $\log(6473)$

page 443:

- ⇒ $5731 \times 10^5 + 1 = 29 \times 43 \times 71 \times 6473$
→ This equation enables the computation of $\log(6473)$
- ⇒ $3365 \times 10^5 + 1 = 3^4 \times 641 \times 6481$
→ This equation enables the computation of $\log(6481)$
- ⇒ $5236 \times 10^4 - 1 = 3 \times 2693 \times 6481$
→ This equation enables the computation of $\log(6481)$
- ⇒ $5028 \times 10^6 + 1 = 19 \times 59 \times 691 \times 6491$
→ This equation enables the computation of $\log(6491)$
- ⇒ $1463 \times 10^6 - 1 = 257 \times 877 \times 6491$
→ This equation enables the computation of $\log(6491)$

page 444:

- ⇒ $2244 \times 10^6 - 1 = 193 \times 1783 \times 6521$
→ This equation enables the computation of $\log(6521)$
- ⇒ $3644 \times 10^5 + 1 = 3^2 \times 7 \times 887 \times 6521$
→ This equation enables the computation of $\log(6521)$
- ⇒ $761 \times 10^7 + 1 = 3 \times 31 \times 83 \times 151 \times 6529$
→ This equation enables the computation of $\log(6529)$
- ⇒ $4281 \times 10^5 + 1 = 7 \times 17 \times 19 \times 29 \times 6529$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(6529)$
- ⇒ $1062 \times 10^7 - 1 = 7 \times 37 \times 6263 \times 6547$
- This equation enables the computation of $\log(6547)$

page 445:

- ⇒ $4073 \times 10^6 - 1 = 19 \times 137 \times 239 \times 6547$
- This equation enables the computation of $\log(6547)$
- ⇒ $376 \times 10^7 - 1 = 3 \times 7 \times 89 \times 307 \times 6553$
- This equation enables the computation of $\log(6553)$
- ⇒ $1718 \times 10^5 + 1 = 3^3 \times 971 \times 6553$
- This equation enables the computation of $\log(6553)$
- ⇒ $3213 \times 10^7 + 1 = 11 \times 599 \times 743 \times 6563$
- This equation enables the computation of $\log(6563)$
- ⇒ $6276 \times 10^5 + 1 = 7 \times 19 \times 719 \times 6563$
- This equation enables the computation of $\log(6563)$
- ⇒ $4418 \times 10^7 + 1 = 3^2 \times 461 \times 1621 \times 6569$
- This equation enables the computation of $\log(6569)$

page 446:

- ⇒ $1677 \times 10^5 + 1 = 7^2 \times 521 \times 6569$
- This equation enables the computation of $\log(6569)$
- ⇒ $3335 \times 10^7 + 1 = 3 \times 97 \times 107 \times 163 \times 6571$
- This equation enables the computation of $\log(6571)$
- ⇒ $6076 \times 10^6 - 1 = 3^3 \times 23 \times 1489 \times 6571$
- This equation enables the computation of $\log(6571)$
- ⇒ $4578 \times 10^8 + 1 = 37 \times 331 \times 4391 \times 8513$
- This equation enables the computation of $\log(8513)$
- ⇒ $5599 \times 10^4 + 1 = 8513 \times 6577$
- This equation enables the computation of $\log(6577)$

page 447:

- ⇒ $2533 \times 10^5 + 1 = 19 \times 2027 \times 6577$
- This equation enables the computation of $\log(6577)$
- ⇒ $2204 \times 10^5 + 1 = 3^3 \times 1237 \times 6599$
- This equation enables the computation of $\log(6599)$
- ⇒ $4356 \times 10^4 - 1 = 7 \times 23 \times 41 \times 6599$
- This equation enables the computation of $\log(6599)$
- ⇒ $908 \times 10^5 + 1 = 3^3 \times 509 \times 6607$
- This equation enables the computation of $\log(6607)$
- ⇒ $4134 \times 10^4 - 1 = 6257 \times 6607$
- This equation enables the computation of $\log(6607)$

page 448:

- ⇒ $5231 \times 10^7 + 1 = 3 \times 7 \times 89 \times 4217 \times 6637$
- This equation enables the computation of $\log(6637)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $5851 \times 10^6 + 1 = 7 \times 11 \times 107^2 \times 6637$
→ This equation enables the computation of $\log(6637)$
- ⇒ $3677 \times 10^6 - 1 = 67 \times 73 \times 113 \times 6653$
→ This equation enables the computation of $\log(6653)$
- ⇒ $2976 \times 10^6 + 1 = 13 \times 19 \times 1811 \times 6653$
→ This equation enables the computation of $\log(6653)$
- ⇒ $3964 \times 10^6 + 1 = 13 \times 19 \times 1847 \times 8689$
→ This equation enables the computation of $\log(8689)$

page 449:

- ⇒ $3872 \times 10^7 + 1 = 3 \times 223 \times 8689 \times 6661$
→ This equation enables the computation of $\log(6661)$
- ⇒ $5415 \times 10^6 + 1 = 827 \times 983 \times 6661$
→ This equation enables the computation of $\log(6661)$
- ⇒ $1408 \times 10^5 - 1 = 3 \times 7027 \times 6679$
→ This equation enables the computation of $\log(6679)$
- ⇒ $5957 \times 10^4 + 1 = 3^2 \times 991 \times 6679$
→ This equation enables the computation of $\log(6679)$
- ⇒ $6524 \times 10^7 + 1 = 3^2 \times 11 \times 149 \times 661 \times 6691$
→ This equation enables the computation of $\log(6691)$

page 450:

- ⇒ $3318 \times 10^5 - 1 = 17 \times 2917 \times 6691$
→ This equation enables the computation of $\log(6691)$
- ⇒ $782 \times 10^6 - 1 = 11 \times 103^2 \times 6701$
→ This equation enables the computation of $\log(6701)$
- ⇒ $4489 \times 10^4 - 1 = 3 \times 7 \times 11 \times 29 \times 6701$
→ This equation enables the computation of $\log(6701)$
- ⇒ $2336 \times 10^6 + 1 = 3 \times 277 \times 419 \times 6709$
→ This equation enables the computation of $\log(6709)$
- ⇒ $3476 \times 10^5 - 1 = 197 \times 263 \times 6709$
→ This equation enables the computation of $\log(6709)$

page 451:

- ⇒ $4954 \times 10^7 - 1 = 3 \times 7 \times 17 \times 19 \times 1087 \times 6719$
→ This equation enables the computation of $\log(6719)$
- ⇒ $2507 \times 10^6 - 1 = 7 \times 151 \times 353 \times 6719$
→ This equation enables the computation of $\log(6719)$
- ⇒ $307 \times 10^{10} + 1 = 11 \times 37 \times 467 \times 2389 \times 6761$
→ This equation enables the computation of $\log(6761)$
- ⇒ $506 \times 10^6 + 1 = 3 \times 13 \times 19 \times 101 \times 6761$
→ This equation enables the computation of $\log(6761)$
- ⇒ $6075 \times 10^5 + 1 = 43 \times 2089 \times 6763$
→ This equation enables the computation of $\log(6763)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

page 452:

- ⇒ $688 \times 10^5 - 1 = 3 \times 3391 \times 6763$
→ This equation enables the computation of $\log(6763)$
- ⇒ $4819 \times 10^8 - 1 = 3 \times 11 \times 23 \times 73 \times 1283 \times 6779$
→ This equation enables the computation of $\log(6779)$
- ⇒ $6042 \times 10^7 + 1 = 37 \times 139 \times 1733 \times 6779$
→ This equation enables the computation of $\log(6779)$
- ⇒ $1143 \times 10^6 + 1 = 11^2 \times 13 \times 107 \times 6791$
→ This equation enables the computation of $\log(6791)$
- ⇒ $2152 \times 10^5 - 1 = 3^2 \times 7 \times 503 \times 6791$
→ This equation enables the computation of $\log(6791)$

page 453:

- ⇒ $1293 \times 10^6 - 1 = 131 \times 1453 \times 6793$
→ This equation enables the computation of $\log(6793)$
- ⇒ $6137 \times 10^5 - 1 = 11 \times 43 \times 191 \times 6793$
→ This equation enables the computation of $\log(6793)$
- ⇒ $448 \times 10^7 - 1 = 3 \times 31 \times 73 \times 97 \times 6803$
→ This equation enables the computation of $\log(6803)$
- ⇒ $3982 \times 10^5 - 1 = 3 \times 109 \times 179 \times 6803$
→ This equation enables the computation of $\log(6803)$
- ⇒ $1323 \times 10^7 + 1 = 419 \times 4357 \times 7247$
→ This equation enables the computation of $\log(7247)$

page 454:

- ⇒ $5983 \times 10^6 + 1 = 11^2 \times 7247 \times 6823$
→ This equation enables the computation of $\log(6823)$
- ⇒ $1184 \times 10^6 - 1 = 7 \times 13 \times 1523 \times 8543$
→ This equation enables the computation of $\log(8543)$
- ⇒ $5246 \times 10^5 + 1 = 3^2 \times 8543 \times 6823$
→ This equation enables the computation of $\log(6823)$
- ⇒ $4291 \times 10^9 + 1 = 11 \times 13 \times 37 \times 211 \times 563 \times 6827$
→ This equation enables the computation of $\log(6827)$
- ⇒ $1001 \times 10^7 - 1 = 863 \times 1699 \times 6827$
→ This equation enables the computation of $\log(6827)$

page 455:

- ⇒ $4676 \times 10^7 + 1 = 3 \times 11^2 \times 13 \times 1451 \times 6829$
→ This equation enables the computation of $\log(6829)$
- ⇒ $5786 \times 10^6 + 1 = 3^2 \times 47 \times 2003 \times 6829$
→ This equation enables the computation of $\log(6829)$
- ⇒ $2342 \times 10^8 + 1 = 3 \times 11 \times 29 \times 83 \times 431 \times 6841$
→ This equation enables the computation of $\log(6841)$
- ⇒ $2897 \times 10^7 + 1 = 3^6 \times 37 \times 157 \times 6841$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(6841)$
- ⇒ $6206 \times 10^8 + 1 = 3 \times 17 \times 37 \times 173 \times 277 \times 6863$
- This equation enables the computation of $\log(6863)$
- ⇒ $293 \times 10^7 + 1 = 3 \times 101 \times 1409 \times 6863$
- This equation enables the computation of $\log(6863)$

page 456:

- ⇒ $5733 \times 10^5 + 1 = 23 \times 3613 \times 6899$
- This equation enables the computation of $\log(6899)$
- ⇒ $4761 \times 10^4 - 1 = 67 \times 103 \times 6899$
- This equation enables the computation of $\log(6899)$
- ⇒ $2921 \times 10^7 + 1 = 3 \times 7^2 \times 13 \times 2213 \times 6907$
- This equation enables the computation of $\log(6907)$
- ⇒ $5325 \times 10^6 - 1 = 11 \times 109 \times 643 \times 6907$
- This equation enables the computation of $\log(6907)$
- ⇒ $1902 \times 10^7 - 1 = 7 \times 11 \times 13 \times 41 \times 67 \times 6917$
- This equation enables the computation of $\log(6917)$

page 457:

- ⇒ $3476 \times 10^5 + 1 = 3 \times 7 \times 2393 \times 6917$
- This equation enables the computation of $\log(6917)$
- ⇒ $122 \times 10^8 + 1 = 3 \times 7 \times 131 \times 563 \times 7877$
- This equation enables the computation of $\log(7877)$
- ⇒ $4323 \times 10^6 + 1 = 79 \times 7877 \times 6947$
- This equation enables the computation of $\log(6947)$
- ⇒ $5399 \times 10^5 - 1 = 23 \times 31 \times 109 \times 6947$
- This equation enables the computation of $\log(6947)$
- ⇒ $6556 \times 10^7 - 1 = 3 \times 13 \times 47 \times 5147 \times 6949$
- This equation enables the computation of $\log(6949)$

page 458:

- ⇒ $4555 \times 10^5 + 1 = 11 \times 59 \times 101 \times 6949$
- This equation enables the computation of $\log(6949)$
- ⇒ $4082 \times 10^5 + 1 = 3 \times 11 \times 1777 \times 6961$
- This equation enables the computation of $\log(6961)$
- ⇒ $2879 \times 10^5 - 1 = 59 \times 701 \times 6961$
- This equation enables the computation of $\log(6961)$
- ⇒ $1526 \times 10^7 - 1 = 827 \times 2647 \times 6971$
- This equation enables the computation of $\log(6971)$
- ⇒ $1318 \times 10^6 - 1 = 3 \times 19 \times 31 \times 107 \times 6971$
- This equation enables the computation of $\log(6971)$

page 459:

- ⇒ $6343 \times 10^5 + 1 = 229 \times 397 \times 6977$
- This equation enables the computation of $\log(6977)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $634 \times 10^5 - 1 = 3 \times 13 \times 233 \times 6977$
→ This equation enables the computation of $\log(6977)$
- ⇒ $6041 \times 10^6 + 1 = 3 \times 113 \times 2549 \times 6991$
→ This equation enables the computation of $\log(6991)$
- ⇒ $4482 \times 10^5 + 1 = 61 \times 1051 \times 6991$
→ This equation enables the computation of $\log(6991)$
- ⇒ $49 \times 10^6 - 1 = 3 \times 2333 \times 7001$
→ This equation enables the computation of $\log(7001)$

page 460:

- ⇒ $2101 \times 10^4 + 1 = 3001 \times 7001$
→ This equation enables the computation of $\log(7001)$
- ⇒ $2916 \times 10^8 - 1 = 7 \times 11 \times 19 \times 97 \times 293 \times 7013$
→ This equation enables the computation of $\log(7013)$
- ⇒ $1108 \times 10^7 - 1 = 3^2 \times 349 \times 503 \times 7013$
→ This equation enables the computation of $\log(7013)$
- ⇒ $389 \times 10^6 - 1 = 157 \times 353 \times 7019$
→ This equation enables the computation of $\log(7019)$
- ⇒ $3805 \times 10^4 - 1 = 3 \times 13 \times 139 \times 7019$
→ This equation enables the computation of $\log(7019)$

page 461:

- ⇒ $4359 \times 10^7 - 1 = 7 \times 13 \times 17 \times 4003 \times 7039$
→ This equation enables the computation of $\log(7039)$
- ⇒ $518 \times 10^5 + 1 = 3 \times 11 \times 223 \times 7039$
→ This equation enables the computation of $\log(7039)$
- ⇒ $6211 \times 10^6 + 1 = 733 \times 1153 \times 7349$
→ This equation enables the computation of $\log(7349)$
- ⇒ $1138 \times 10^6 - 1 = 3 \times 71 \times 727 \times 7349$
→ This equation enables the computation of $\log(7349)$
- ⇒ $6445 \times 10^6 - 1 = 3^2 \times 17 \times 5981 \times 7043$
→ This equation enables the computation of $\log(7043)$

page 462:

- ⇒ $598 \times 10^6 + 1 = 197 \times 431 \times 7043$
→ This equation enables the computation of $\log(7043)$
- ⇒ $947 \times 10^6 + 1 = 3 \times 41 \times 1091 \times 7057$
→ This equation enables the computation of $\log(7057)$
- ⇒ $4644 \times 10^5 - 1 = 7^2 \times 17 \times 79 \times 7057$
→ This equation enables the computation of $\log(7057)$
- ⇒ $668 \times 10^7 - 1 = 821 \times 1151 \times 7069$
→ This equation enables the computation of $\log(7069)$
- ⇒ $389 \times 10^6 + 1 = 3 \times 13 \times 17 \times 83 \times 7069$
→ This equation enables the computation of $\log(7069)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

page 463:

- ⇒ $5093 \times 10^7 + 1 = 3^2 \times 17 \times 59 \times 797 \times 7079$
→ This equation enables the computation of $\log(7079)$
- ⇒ $1986 \times 10^7 - 1 = 7 \times 241 \times 1663 \times 7079$
→ This equation enables the computation of $\log(7079)$
- ⇒ $6021 \times 10^5 + 1 = 29 \times 37 \times 79 \times 7103$
→ This equation enables the computation of $\log(7103)$
- ⇒ $3717 \times 10^4 - 1 = 5233 \times 7103$
→ This equation enables the computation of $\log(7103)$
- ⇒ $5788 \times 10^8 - 1 = 3^3 \times 13^2 \times 47 \times 379 \times 7121$
→ This equation enables the computation of $\log(7121)$

page 464:

- ⇒ $912 \times 10^7 - 1 = 11 \times 173 \times 673 \times 7121$
→ This equation enables the computation of $\log(7121)$
- ⇒ $958 \times 10^7 + 1 = 11 \times 13 \times 53 \times 131 \times 9649$
→ This equation enables the computation of $\log(9649)$
- ⇒ $69 \times 10^6 - 1 = 9649 \times 7151$
→ This equation enables the computation of $\log(7151)$
- ⇒ $1358 \times 10^8 + 1 = 3^2 \times 1103 \times 1913 \times 7151$
→ This equation enables the computation of $\log(7151)$
- ⇒ $2059 \times 10^5 - 1 = 3 \times 9587 \times 7159$
→ This equation enables the computation of $\log(7159)$

page 465:

- ⇒ $2179 \times 10^7 - 1 = 3^3 \times 251 \times 367 \times 8761$
→ This equation enables the computation of $\log(8761)$
- ⇒ $6272 \times 10^4 - 1 = 8761 \times 7159$
→ This equation enables the computation of $\log(7159)$
- ⇒ $974 \times 10^7 + 1 = 3 \times 19 \times 29 \times 821 \times 7177$
→ This equation enables the computation of $\log(7177)$
- ⇒ $2563 \times 10^6 + 1 = 181 \times 1973 \times 7177$
→ This equation enables the computation of $\log(7177)$
- ⇒ $2661 \times 10^6 - 1 = 7 \times 41 \times 1289 \times 7193$
→ This equation enables the computation of $\log(7193)$
- ⇒ $5031 \times 10^5 - 1 = 23 \times 3041 \times 7193$
→ This equation enables the computation of $\log(7193)$

page 466:

- ⇒ $4249 \times 10^7 - 1 = 3^2 \times 349 \times 1877 \times 7207$
→ This equation enables the computation of $\log(7207)$
- ⇒ $6894 \times 10^5 - 1 = 23 \times 4159 \times 7207$
→ This equation enables the computation of $\log(7207)$
- ⇒ $5344 \times 10^5 - 1 = 3 \times 7 \times 3529 \times 7211$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(7211)$
- ⇒ $1867 \times 10^5 + 1 = 17 \times 1523 \times 7211$
- This equation enables the computation of $\log(7211)$

page 467:

- ⇒ $3215 \times 10^6 - 1 = 17 \times 157 \times 167 \times 7213$
- This equation enables the computation of $\log(7213)$
- ⇒ $3998 \times 10^6 + 1 = 3 \times 23 \times 29 \times 277 \times 7213$
- This equation enables the computation of $\log(7213)$
- ⇒ $3099 \times 10^5 + 1 = 163 \times 263 \times 7229$
- This equation enables the computation of $\log(7229)$
- ⇒ $5155 \times 10^4 - 1 = 3 \times 2377 \times 7229$
- This equation enables the computation of $\log(7229)$
- ⇒ $4312 \times 10^6 - 1 = 3^2 \times 239 \times 277 \times 7237$
- This equation enables the computation of $\log(7237)$
- ⇒ $2925 \times 10^6 + 1 = 7 \times 11 \times 29 \times 181 \times 7237$
- This equation enables the computation of $\log(7237)$

page 468:

- ⇒ $1503 \times 10^7 + 1 = 487 \times 4261 \times 7243$
- This equation enables the computation of $\log(7243)$
- ⇒ $6699 \times 10^6 - 1 = 179 \times 5167 \times 7243$
- This equation enables the computation of $\log(7243)$
- ⇒ $603 \times 10^7 - 1 = 19 \times 23 \times 31 \times 61 \times 7297$
- This equation enables the computation of $\log(7297)$
- ⇒ $1267 \times 10^6 + 1 = 401 \times 433 \times 7297$
- This equation enables the computation of $\log(7297)$
- ⇒ $7238 \times 10^6 - 1 = 647 \times 1531 \times 7307$
- This equation enables the computation of $\log(7307)$

page 469:

- ⇒ $6617 \times 10^5 - 1 = 137 \times 661 \times 7307$
- This equation enables the computation of $\log(7307)$
- ⇒ $2599 \times 10^6 + 1 = 13 \times 17 \times 1609 \times 7309$
- This equation enables the computation of $\log(7309)$
- ⇒ $3246 \times 10^5 - 1 = 89 \times 499 \times 7309$
- This equation enables the computation of $\log(7309)$
- ⇒ $708 \times 10^7 + 1 = 19 \times 23 \times 2213 \times 7321$
- This equation enables the computation of $\log(7321)$
- ⇒ $4911 \times 10^5 + 1 = 7^2 \times 37^2 \times 7321$
- This equation enables the computation of $\log(7321)$

page 470:

- ⇒ $5149 \times 10^7 + 1 = 11 \times 397 \times 1291 \times 9133$
- This equation enables the computation of $\log(9133)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $5825 \times 10^6 + 1 = 3 \times 29 \times 9133 \times 7331$
→ This equation enables the computation of $\log(7331)$
- ⇒ $6933 \times 10^5 + 1 = 17 \times 5563 \times 7331$
→ This equation enables the computation of $\log(7331)$
- ⇒ $5989 \times 10^6 + 1 = 271 \times 2999 \times 7369$
→ This equation enables the computation of $\log(7369)$
- ⇒ $138 \times 10^7 - 1 = 7 \times 31 \times 863 \times 7369$
→ This equation enables the computation of $\log(7369)$

page 471:

- ⇒ $2888 \times 10^6 + 1 = 3^4 \times 17 \times 283 \times 7411$
→ This equation enables the computation of $\log(7411)$
- ⇒ $6647 \times 10^5 + 1 = 3 \times 7 \times 4271 \times 7411$
→ This equation enables the computation of $\log(7411)$
- ⇒ $3677 \times 10^6 + 1 = 3 \times 257 \times 643 \times 7417$
→ This equation enables the computation of $\log(7417)$
- ⇒ $4267 \times 10^4 + 1 = 11 \times 523 \times 7417$
→ This equation enables the computation of $\log(7417)$
- ⇒ $6964 \times 10^6 - 1 = 3 \times 11^2 \times 29 \times 89 \times 7433$
→ This equation enables the computation of $\log(7433)$
- ⇒ $5131 \times 10^4 - 1 = 3^2 \times 13 \times 59 \times 7433$
→ This equation enables the computation of $\log(7433)$

page 472:

- ⇒ $4071 \times 10^5 + 1 = 7 \times 11 \times 709 \times 7457$
→ This equation enables the computation of $\log(7457)$
- ⇒ $3386 \times 10^5 - 1 = 17 \times 2671 \times 7457$
→ This equation enables the computation of $\log(7457)$
- ⇒ $5632 \times 10^6 - 1 = 3 \times 293 \times 859 \times 7459$
→ This equation enables the computation of $\log(7459)$
- ⇒ $3775 \times 10^4 - 1 = 3 \times 7 \times 241 \times 7459$
→ This equation enables the computation of $\log(7459)$
- ⇒ $6664 \times 10^5 - 1 = 3 \times 23 \times 1291 \times 7481$
→ This equation enables the computation of $\log(7481)$

page 473:

- ⇒ $6792 \times 10^4 - 1 = 7 \times 1297 \times 7481$
→ This equation enables the computation of $\log(7481)$
- ⇒ $4796 \times 10^6 - 1 = 7^2 \times 17 \times 769 \times 7487$
→ This equation enables the computation of $\log(7487)$
- ⇒ $4449 \times 10^5 + 1 = 7 \times 13 \times 653 \times 7487$
→ This equation enables the computation of $\log(7487)$
- ⇒ $5741 \times 10^6 - 1 = 7 \times 97 \times 1129 \times 7489$
→ This equation enables the computation of $\log(7489)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\Rightarrow 1748 \times 10^6 + 1 = 3 \times 11^2 \times 643 \times 7489$$

→ This equation enables the computation of $\log(7489)$

page 474:

$$\Rightarrow 5541 \times 10^8 - 1 = 7 \times 13 \times 17 \times 113 \times 421 \times 7529$$

→ This equation enables the computation of $\log(7529)$

$$\Rightarrow 2707 \times 10^7 - 1 = 3 \times 7 \times 313 \times 547 \times 7529$$

→ This equation enables the computation of $\log(7529)$

$$\Rightarrow 2755 \times 10^6 + 1 = 13 \times 67 \times 419 \times 7549$$

→ This equation enables the computation of $\log(7549)$

$$\Rightarrow 4903 \times 10^5 + 1 = 107 \times 607 \times 7549$$

→ This equation enables the computation of $\log(7549)$

$$\Rightarrow 7084 \times 10^6 - 1 = 3^2 \times 31 \times 3359 \times 7559$$

→ This equation enables the computation of $\log(7559)$

page 475:

$$\Rightarrow 475 \times 10^6 + 1 = 7 \times 47 \times 191 \times 7559$$

→ This equation enables the computation of $\log(7559)$

$$\Rightarrow 672 \times 10^7 - 1 = 23 \times 41 \times 941 \times 7573$$

→ This equation enables the computation of $\log(7573)$

$$\Rightarrow 6616 \times 10^5 - 1 = 3^2 \times 17 \times 571 \times 7573$$

→ This equation enables the computation of $\log(7573)$

$$\Rightarrow 42 \times 10^8 - 1 = 13^2 \times 53 \times 61 \times 7687$$

→ This equation enables the computation of $\log(7687)$

$$\Rightarrow 3565 \times 10^5 - 1 = 3^2 \times 5153 \times 7687$$

→ This equation enables the computation of $\log(7687)$

page 476:

$$\Rightarrow 5656 \times 10^7 - 1 = 3 \times 31^2 \times 2579 \times 7607$$

→ This equation enables the computation of $\log(7607)$

$$\Rightarrow 1951 \times 10^7 + 1 = 47 \times 197 \times 277 \times 7607$$

→ This equation enables the computation of $\log(7607)$

$$\Rightarrow 3918 \times 10^6 - 1 = 191 \times 2663 \times 7703$$

→ This equation enables the computation of $\log(7703)$

$$\Rightarrow 665 \times 10^5 - 1 = 89 \times 97 \times 7703$$

→ This equation enables the computation of $\log(7703)$

$$\Rightarrow 1677 \times 10^7 - 1 = 79 \times 109 \times 251 \times 7759$$

→ This equation enables the computation of $\log(7759)$

page 477:

$$\Rightarrow 4761 \times 10^5 - 1 = 43 \times 1427 \times 7759$$

→ This equation enables the computation of $\log(7759)$

$$\Rightarrow 6867 \times 10^5 - 1 = 107 \times 821 \times 7817$$

→ This equation enables the computation of $\log(7817)$

$$\Rightarrow 95 \times 10^6 + 1 = 3 \times 4051 \times 7817$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(7817)$
- ⇒ $844 \times 10^6 + 1 = 13 \times 43 \times 193 \times 7823$
- This equation enables the computation of $\log(7823)$
- ⇒ $617 \times 10^5 + 1 = 3 \times 11 \times 239 \times 7823$
- This equation enables the computation of $\log(7823)$

page 478:

- ⇒ $592 \times 10^7 + 1 = 389 \times 1933 \times 7873$
- This equation enables the computation of $\log(7873)$
- ⇒ $4089 \times 10^5 + 1 = 167 \times 311 \times 7873$
- This equation enables the computation of $\log(7873)$
- ⇒ $7346 \times 10^6 + 1 = 3 \times 19 \times 73 \times 233 \times 7577$
- This equation enables the computation of $\log(7577)$
- ⇒ $5267 \times 10^5 + 1 = 3 \times 17 \times 29 \times 47 \times 7577$
- This equation enables the computation of $\log(7577)$
- ⇒ $7303 \times 10^7 - 1 = 3 \times 11^2 \times 43 \times 617 \times 7583$
- This equation enables the computation of $\log(7583)$
- ⇒ $4783 \times 10^6 - 1 = 3 \times 53 \times 3967 \times 7583$
- This equation enables the computation of $\log(7583)$

page 479:

- ⇒ $4589 \times 10^6 - 1 = 37 \times 59 \times 277 \times 7589$
- This equation enables the computation of $\log(7589)$
- ⇒ $7233 \times 10^5 + 1 = 191 \times 499 \times 7589$
- This equation enables the computation of $\log(7589)$
- ⇒ $74 \times 10^6 - 1 = 9733 \times 7603$
- This equation enables the computation of $\log(7603)$
- ⇒ $5573 \times 10^3 - 1 = 733 \times 7603$
- This equation enables the computation of $\log(7603)$
- ⇒ $3725 \times 10^6 + 1 = 3^3 \times 43 \times 421 \times 7621$
- This equation enables the computation of $\log(7621)$
- ⇒ $3896 \times 10^6 - 1 = 47 \times 73 \times 149 \times 7621$
- This equation enables the computation of $\log(7621)$

page 480:

- ⇒ $5204 \times 10^6 - 1 = 11 \times 17 \times 3643 \times 7639$
- This equation enables the computation of $\log(7639)$
- ⇒ $2435 \times 10^6 + 1 = 3 \times 7 \times 43 \times 353 \times 7639$
- This equation enables the computation of $\log(7639)$
- ⇒ $455 \times 10^7 + 1 = 3 \times 23 \times 37 \times 233 \times 7649$
- This equation enables the computation of $\log(7649)$
- ⇒ $3099 \times 10^6 - 1 = 379 \times 1069 \times 7649$
- This equation enables the computation of $\log(7649)$
- ⇒ $2098 \times 10^7 - 1 = 3^3 \times 7 \times 17 \times 23 \times 37 \times 7673$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(7673)$
- ⇒ $2039 \times 10^6 + 1 = 3 \times 283 \times 313 \times 7673$
- This equation enables the computation of $\log(7673)$
- ⇒ $6284 \times 10^7 - 1 = 7 \times 19 \times 23 \times 2671 \times 7691$
- This equation enables the computation of $\log(7691)$

page 481:

- ⇒ $1407 \times 10^7 + 1 = 503 \times 3637 \times 7691$
- This equation enables the computation of $\log(7691)$
- ⇒ $5407 \times 10^6 + 1 = 13 \times 89 \times 607 \times 7699$
- This equation enables the computation of $\log(7699)$
- ⇒ $2292 \times 10^6 - 1 = 41 \times 53 \times 137 \times 7699$
- This equation enables the computation of $\log(7699)$
- ⇒ $5224 \times 10^6 - 1 = 3 \times 29 \times 31 \times 251 \times 7717$
- This equation enables the computation of $\log(7717)$
- ⇒ $5938 \times 10^5 - 1 = 3 \times 13 \times 1973 \times 7717$
- This equation enables the computation of $\log(7717)$
- ⇒ $4902 \times 10^6 - 1 = 13 \times 103 \times 463 \times 7907$
- This equation enables the computation of $\log(7907)$

page 482:

- ⇒ $1578 \times 10^5 - 1 = 7 \times 2851 \times 7907$
- This equation enables the computation of $\log(7907)$
- ⇒ $4159 \times 10^7 - 1 = 3^2 \times 29 \times 47 \times 439 \times 7723$
- This equation enables the computation of $\log(7723)$
- ⇒ $4748 \times 10^6 + 1 = 3 \times 101 \times 2029 \times 7723$
- This equation enables the computation of $\log(7723)$
- ⇒ $2353 \times 10^8 + 1 = 11 \times 419 \times 6607 \times 7727$
- This equation enables the computation of $\log(7727)$
- ⇒ $3992 \times 10^5 + 1 = 3 \times 17 \times 1013 \times 7727$
- This equation enables the computation of $\log(7727)$
- ⇒ $3374 \times 10^6 + 1 = 3^4 \times 5381 \times 7741$
- This equation enables the computation of $\log(7741)$

page 483:

- ⇒ $4367 \times 10^6 - 1 = 37 \times 79 \times 193 \times 7741$
- This equation enables the computation of $\log(7741)$
- ⇒ $2992 \times 10^7 - 1 = 3 \times 523 \times 2447 \times 7793$
- This equation enables the computation of $\log(7793)$
- ⇒ $6541 \times 10^6 - 1 = 3 \times 127 \times 2203 \times 7793$
- This equation enables the computation of $\log(7793)$
- ⇒ $5861 \times 10^7 + 1 = 3 \times 7^2 \times 127 \times 401 \times 7829$
- This equation enables the computation of $\log(7829)$
- ⇒ $1075 \times 10^5 - 1 = 3 \times 23 \times 199 \times 7829$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(7829)$
- ⇒ $1475 \times 10^9 + 1 = 3^2 \times 11 \times 983 \times 1933 \times 7841$
- This equation enables the computation of $\log(7841)$
- ⇒ $6949 \times 10^6 - 1 = 3^2 \times 59 \times 1669 \times 7841$
- This equation enables the computation of $\log(7841)$

page 484:

- ⇒ $6508 \times 10^6 + 1 = 197 \times 4261 \times 7753$
- This equation enables the computation of $\log(7753)$
- ⇒ $4697 \times 10^5 - 1 = 47 \times 1289 \times 7753$
- This equation enables the computation of $\log(7753)$
- ⇒ $77 \times 10^8 + 1 = 3 \times 211 \times 1549 \times 7853$
- This equation enables the computation of $\log(7853)$
- ⇒ $7447 \times 10^4 - 1 = 3 \times 29 \times 109 \times 7853$
- This equation enables the computation of $\log(7853)$
- ⇒ $729 \times 10^7 - 1 = 37 \times 79 \times 271 \times 9203$
- This equation enables the computation of $\log(9203)$
- ⇒ $724 \times 10^5 + 1 = 9203 \times 7867$
- This equation enables the computation of $\log(7867)$

page 485:

- ⇒ $7143 \times 10^5 - 1 = 7^2 \times 17 \times 109 \times 7867$
- This equation enables the computation of $\log(7867)$
- ⇒ $6821 \times 10^6 + 1 = 3^2 \times 43 \times 2237 \times 7879$
- This equation enables the computation of $\log(7879)$
- ⇒ $2701 \times 10^5 - 1 = 3^2 \times 13 \times 293 \times 7879$
- This equation enables the computation of $\log(7879)$
- ⇒ $5002 \times 10^5 - 1 = 3 \times 13 \times 1627 \times 7883$
- This equation enables the computation of $\log(7883)$
- ⇒ $2881 \times 10^5 + 1 = 7 \times 23 \times 227 \times 7883$
- This equation enables the computation of $\log(7883)$

page 486:

- ⇒ $475 \times 10^9 - 1 = 3 \times 7^2 \times 23 \times 113 \times 157 \times 7919$
- This equation enables the computation of $\log(7919)$
- ⇒ $3169 \times 10^8 + 1 = 13^2 \times 107 \times 2213 \times 7919$
- This equation enables the computation of $\log(7919)$
- ⇒ $3656 \times 10^7 + 1 = 3 \times 7^2 \times 107 \times 293 \times 7933$
- This equation enables the computation of $\log(7933)$
- ⇒ $4828 \times 10^6 + 1 = 11 \times 61 \times 907 \times 7933$
- This equation enables the computation of $\log(7933)$
- ⇒ $5621 \times 10^7 + 1 = 3 \times 571 \times 4127 \times 7951$
- This equation enables the computation of $\log(7951)$
- ⇒ $7398 \times 10^6 - 1 = 13 \times 19 \times 3767 \times 7951$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(7951)$
- ⇒ $4403 \times 10^6 + 1 = 3 \times 139 \times 1321 \times 7993$
- This equation enables the computation of $\log(7993)$

page 487:

- ⇒ $359 \times 10^7 - 1 = 37 \times 61 \times 199 \times 7993$
- This equation enables the computation of $\log(7993)$
- ⇒ $2248 \times 10^7 - 1 = 3 \times 227 \times 4091 \times 8069$
- This equation enables the computation of $\log(8069)$
- ⇒ $1727 \times 10^6 + 1 = 3^3 \times 8069 \times 7927$
- This equation enables the computation of $\log(7927)$
- ⇒ $4775 \times 10^7 - 1 = 13 \times 103 \times 4493 \times 7937$
- This equation enables the computation of $\log(7937)$
- ⇒ $4863 \times 10^4 - 1 = 11 \times 557 \times 7937$
- This equation enables the computation of $\log(7937)$
- ⇒ $6511 \times 10^5 - 1 = 3 \times 11 \times 19 \times 131 \times 7927$
- This equation enables the computation of $\log(7927)$

page 488:

- ⇒ $3117 \times 10^5 - 1 = 13 \times 41 \times 73 \times 8011$
- This equation enables the computation of $\log(8011)$
- ⇒ $7137 \times 10^4 - 1 = 59 \times 151 \times 8011$
- This equation enables the computation of $\log(8011)$
- ⇒ $344 \times 10^6 + 1 = 3 \times 29 \times 491 \times 8053$
- This equation enables the computation of $\log(8053)$
- ⇒ $5865 \times 10^4 - 1 = 7283 \times 8053$
- This equation enables the computation of $\log(8053)$
- ⇒ $2377 \times 10^8 - 1 = 3^2 \times 7 \times 11 \times 113 \times 379 \times 8009$
- This equation enables the computation of $\log(8009)$
- ⇒ $1673 \times 10^5 + 1 = 3^2 \times 11 \times 211 \times 8009$
- This equation enables the computation of $\log(8009)$

page 489:

- ⇒ $7207 \times 10^7 - 1 = 3 \times 79 \times 83 \times 457 \times 8017$
- This equation enables the computation of $\log(8017)$
- ⇒ $7187 \times 10^5 - 1 = 157 \times 571 \times 8017$
- This equation enables the computation of $\log(8017)$
- ⇒ $7447 \times 10^6 + 1 = 7 \times 59 \times 2243 \times 8039$
- This equation enables the computation of $\log(8039)$
- ⇒ $2119 \times 10^5 + 1 = 43 \times 613 \times 8039$
- This equation enables the computation of $\log(8039)$
- ⇒ $794 \times 10^8 + 1 = 3 \times 7 \times 179 \times 2621 \times 8059$
- This equation enables the computation of $\log(8059)$
- ⇒ $6869 \times 10^6 + 1 = 3 \times 29 \times 97 \times 101 \times 8059$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(8059)$

page 490:

$$\Rightarrow 4229 \times 10^9 + 1 = 3^2 \times 7^2 \times 1031 \times 1151 \times 8081$$

→ This equation enables the computation of $\log(8081)$

$$\Rightarrow 5444 \times 10^6 - 1 = 163 \times 4133 \times 8081$$

→ This equation enables the computation of $\log(8081)$

$$\Rightarrow 2248 \times 10^6 - 1 = 3 \times 7^2 \times 31 \times 61 \times 8087$$

→ This equation enables the computation of $\log(8087)$

$$\Rightarrow 1781 \times 10^5 + 1 = 3^2 \times 2447 \times 8087$$

→ This equation enables the computation of $\log(8087)$

$$\Rightarrow 1055 \times 10^8 + 1 = 3 \times 11 \times 17 \times 19 \times 1223 \times 8093$$

→ This equation enables the computation of $\log(8093)$

$$\Rightarrow 291 \times 10^6 + 1 = 41 \times 877 \times 8093$$

→ This equation enables the computation of $\log(8093)$

page 491:

$$\Rightarrow 715 \times 10^6 + 1 = 19 \times 43 \times 107 \times 8179$$

→ This equation enables the computation of $\log(8179)$

$$\Rightarrow 1029 \times 10^5 - 1 = 23 \times 547 \times 8179$$

→ This equation enables the computation of $\log(8179)$

$$\Rightarrow 2525 \times 10^7 + 1 = 3 \times 23^2 \times 1933 \times 8231$$

→ This equation enables the computation of $\log(8231)$

$$\Rightarrow 956 \times 10^8 - 1 = 7 \times 613 \times 2693 \times 8273$$

→ This equation enables the computation of $\log(8273)$

$$\Rightarrow 6986 \times 10^7 + 1 = 3 \times 11 \times 83 \times 3083 \times 8273$$

→ This equation enables the computation of $\log(8273)$

$$\Rightarrow 1327 \times 10^8 + 1 = 17 \times 29 \times 139 \times 233 \times 8311$$

→ This equation enables the computation of $\log(8311)$

$$\Rightarrow 276 \times 10^6 - 1 = 11 \times 3019 \times 8311$$

→ This equation enables the computation of $\log(8311)$

page 492:

$$\Rightarrow 4645 \times 10^5 + 1 = 7 \times 31 \times 257 \times 8329$$

→ This equation enables the computation of $\log(8329)$

$$\Rightarrow 3684 \times 10^5 - 1 = 11 \times 4021 \times 8329$$

→ This equation enables the computation of $\log(8329)$

$$\Rightarrow 7319 \times 10^6 + 1 = 3 \times 109 \times 2767 \times 8089$$

→ This equation enables the computation of $\log(8089)$

$$\Rightarrow 4199 \times 10^4 - 1 = 29 \times 179 \times 8089$$

→ This equation enables the computation of $\log(8089)$

$$\Rightarrow 5103 \times 10^9 - 1 = 11^3 \times 331 \times 1427 \times 8117$$

→ This equation enables the computation of $\log(8117)$

$$\Rightarrow 1071 \times 10^7 + 1 = 31^2 \times 1373 \times 8117$$

→ This equation enables the computation of $\log(8117)$

page 493:

- ⇒ $2394 \times 10^7 + 1 = 809 \times 3643 \times 8123$
- This equation enables the computation of $\log(8123)$
- ⇒ $3833 \times 10^5 + 1 = 3^2 \times 7^2 \times 107 \times 8123$
- This equation enables the computation of $\log(8123)$
- ⇒ $3581 \times 10^7 + 1 = 3^2 \times 191 \times 2557 \times 8147$
- This equation enables the computation of $\log(8147)$
- ⇒ $3222 \times 10^6 + 1 = 11 \times 157 \times 229 \times 8147$
- This equation enables the computation of $\log(8147)$
- ⇒ $5934 \times 10^7 - 1 = 7 \times 353 \times 2939 \times 8171$
- This equation enables the computation of $\log(8171)$
- ⇒ $2143 \times 10^6 - 1 = 3^2 \times 7 \times 23 \times 181 \times 8171$
- This equation enables the computation of $\log(8171)$

page 494:

- ⇒ $6445 \times 10^7 - 1 = 3^3 \times 7 \times 11 \times 23 \times 163 \times 8269$
- This equation enables the computation of $\log(8269)$
- ⇒ $1702 \times 10^6 + 1 = 13 \times 71 \times 223 \times 8269$
- This equation enables the computation of $\log(8269)$
- ⇒ $86 \times 10^7 - 1 = 157 \times 661 \times 8287$
- This equation enables the computation of $\log(8287)$
- ⇒ $5157 \times 10^4 + 1 = 7^2 \times 127 \times 8287$
- This equation enables the computation of $\log(8287)$
- ⇒ $5939 \times 10^7 - 1 = 11 \times 23^2 \times 1231 \times 8291$
- This equation enables the computation of $\log(8291)$
- ⇒ $2352 \times 10^7 + 1 = 79 \times 149 \times 241 \times 8291$
- This equation enables the computation of $\log(8291)$
- ⇒ $6337 \times 10^8 - 1 = 3^2 \times 11 \times 23 \times 37 \times 907 \times 8293$
- This equation enables the computation of $\log(8293)$

page 495:

- ⇒ $1956 \times 10^8 + 1 = 7 \times 17^2 \times 89 \times 131 \times 8293$
- This equation enables the computation of $\log(8293)$
- ⇒ $2863 \times 10^7 - 1 = 3^2 \times 17 \times 149 \times 151 \times 8317$
- This equation enables the computation of $\log(8317)$
- ⇒ $4638 \times 10^6 + 1 = 97 \times 5749 \times 8317$
- This equation enables the computation of $\log(8317)$
- ⇒ $3687 \times 10^7 - 1 = 7 \times 389 \times 1621 \times 8353$
- This equation enables the computation of $\log(8353)$
- ⇒ $4895 \times 10^6 + 1 = 3^2 \times 19 \times 23 \times 149 \times 8353$
- This equation enables the computation of $\log(8353)$
- ⇒ $3111 \times 10^6 + 1 = 127 \times 2927 \times 8369$

→ This equation enables the computation of $\log(8369)$

page 496:

$$\Rightarrow 2366 \times 10^5 - 1 = 17 \times 1663 \times 8369$$

→ This equation enables the computation of $\log(8369)$

$$\Rightarrow 1101 \times 10^7 + 1 = 7 \times 11 \times 13^2 \times 101 \times 8377$$

→ This equation enables the computation of $\log(8377)$

$$\Rightarrow 5744 \times 10^6 - 1 = 139 \times 4933 \times 8377$$

→ This equation enables the computation of $\log(8377)$

$$\Rightarrow 7369 \times 10^7 - 1 = 3 \times 7^2 \times 11 \times 5413 \times 8419$$

→ This equation enables the computation of $\log(8419)$

$$\Rightarrow 105 \times 10^8 + 1 = 19 \times 41 \times 1601 \times 8419$$

→ This equation enables the computation of $\log(8419)$

$$\Rightarrow 4296 \times 10^6 + 1 = 67 \times 7607 \times 8429$$

→ This equation enables the computation of $\log(8429)$

$$\Rightarrow 7614 \times 10^5 - 1 = 103 \times 877 \times 8429$$

→ This equation enables the computation of $\log(8429)$

page 497:

$$\Rightarrow 7875 \times 10^7 - 1 = 11 \times 719 \times 1181 \times 8431$$

→ This equation enables the computation of $\log(8431)$

$$\Rightarrow 556 \times 10^7 + 1 = 19 \times 61 \times 569 \times 8431$$

→ This equation enables the computation of $\log(8431)$

$$\Rightarrow 2045 \times 10^5 - 1 = 11 \times 37 \times 61 \times 8237$$

→ This equation enables the computation of $\log(8237)$

$$\Rightarrow 4261 \times 10^4 + 1 = 7 \times 739 \times 8237$$

→ This equation enables the computation of $\log(8237)$

$$\Rightarrow 3674 \times 10^7 + 1 = 3 \times 37 \times 41 \times 977 \times 8263$$

→ This equation enables the computation of $\log(8263)$

$$\Rightarrow 5228 \times 10^4 + 1 = 3^2 \times 19 \times 37 \times 8263$$

→ This equation enables the computation of $\log(8263)$

page 498:

$$\Rightarrow 1007 \times 10^8 - 1 = 59 \times 109 \times 1867 \times 8387$$

→ This equation enables the computation of $\log(8387)$

$$\Rightarrow 6704 \times 10^7 + 1 = 3^4 \times 13 \times 7591 \times 8387$$

→ This equation enables the computation of $\log(8387)$

$$\Rightarrow 1905 \times 10^7 + 1 = 19 \times 149 \times 797 \times 8443$$

→ This equation enables the computation of $\log(8443)$

$$\Rightarrow 4754 \times 10^5 + 1 = 3 \times 137^2 \times 8443$$

→ This equation enables the computation of $\log(8443)$

$$\Rightarrow 6448 \times 10^6 - 1 = 3 \times 7 \times 19 \times 1901 \times 8501$$

→ This equation enables the computation of $\log(8501)$

$$\Rightarrow 2053 \times 10^6 + 1 = 13^2 \times 1429 \times 8501$$

→ This equation enables the computation of $\log(8501)$

page 499:

$$\Rightarrow 3976 \times 10^7 - 1 = 3 \times 443 \times 3511 \times 8521$$

→ This equation enables the computation of $\log(8521)$

$$\Rightarrow 2845 \times 10^6 + 1 = 59 \times 5659 \times 8521$$

→ This equation enables the computation of $\log(8521)$

$$\Rightarrow 5548 \times 10^7 - 1 = 3 \times 23 \times 79 \times 1069 \times 9521$$

→ This equation enables the computation of $\log(9521)$

$$\Rightarrow 7875 \times 10^6 - 1 = 97 \times 9521 \times 8527$$

→ This equation enables the computation of $\log(8527)$

$$\Rightarrow 5511 \times 10^4 + 1 = 23 \times 281 \times 8527$$

→ This equation enables the computation of $\log(8527)$

$$\Rightarrow 173 \times 10^8 + 1 = 3 \times 59 \times 107^2 \times 8537$$

→ This equation enables the computation of $\log(8537)$

page 500:

$$\Rightarrow 226 \times 10^6 + 1 = 23 \times 1151 \times 8537$$

→ This equation enables the computation of $\log(8537)$

$$\Rightarrow 6525 \times 10^6 - 1 = 7 \times 173 \times 631 \times 8539$$

→ This equation enables the computation of $\log(8539)$

$$\Rightarrow 5477 \times 10^5 - 1 = 7^3 \times 11 \times 17 \times 8539$$

→ This equation enables the computation of $\log(8539)$

$$\Rightarrow 906 \times 10^7 + 1 = 13 \times 241 \times 337 \times 8581$$

→ This equation enables the computation of $\log(8581)$

$$\Rightarrow 479 \times 10^6 + 1 = 3 \times 23 \times 809 \times 8581$$

→ This equation enables the computation of $\log(8581)$

$$\Rightarrow 6715 \times 10^7 - 1 = 3^3 \times 379 \times 761 \times 8623$$

→ This equation enables the computation of $\log(8623)$

page 501:

$$\Rightarrow 1908 \times 10^7 + 1 = 31 \times 137 \times 521 \times 8623$$

→ This equation enables the computation of $\log(8623)$

$$\Rightarrow 4315 \times 10^6 - 1 = 3 \times 181 \times 919 \times 8647$$

→ This equation enables the computation of $\log(8647)$

$$\Rightarrow 7797 \times 10^4 - 1 = 71 \times 127 \times 8647$$

→ This equation enables the computation of $\log(8647)$

$$\Rightarrow 1132 \times 10^7 + 1 = 17 \times 41 \times 1867 \times 8699$$

→ This equation enables the computation of $\log(8699)$

$$\Rightarrow 8586 \times 10^5 - 1 = 89 \times 1109 \times 8699$$

→ This equation enables the computation of $\log(8699)$

$$\Rightarrow 3103 \times 10^6 - 1 = 3 \times 11 \times 79 \times 139 \times 8563$$

→ This equation enables the computation of $\log(8563)$

$$\Rightarrow 5341 \times 10^5 - 1 = 3 \times 17 \times 1223 \times 8563$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(8563)$

page 502:

$$\Rightarrow 2946 \times 10^6 + 1 = 7^2 \times 7013 \times 8573$$

→ This equation enables the computation of $\log(8573)$

$$\Rightarrow 5627 \times 10^6 - 1 = 31^2 \times 683 \times 8573$$

→ This equation enables the computation of $\log(8573)$

$$\Rightarrow 509 \times 10^7 - 1 = 7^2 \times 43 \times 281 \times 8597$$

→ This equation enables the computation of $\log(8597)$

$$\Rightarrow 3507 \times 10^6 + 1 = 503 \times 811 \times 8597$$

→ This equation enables the computation of $\log(8597)$

$$\Rightarrow 2577 \times 10^8 - 1 = 13^2 \times 383 \times 463 \times 8599$$

→ This equation enables the computation of $\log(8599)$

$$\Rightarrow 5899 \times 10^5 - 1 = 3 \times 13 \times 1759 \times 8599$$

→ This equation enables the computation of $\log(8599)$

page 503:

$$\Rightarrow 825 \times 10^5 + 1 = 73 \times 131 \times 8627$$

→ This equation enables the computation of $\log(8627)$

$$\Rightarrow 4857 \times 10^3 + 1 = 563 \times 8627$$

→ This equation enables the computation of $\log(8627)$

$$\Rightarrow 2543 \times 10^8 + 1 = 3 \times 37 \times 373 \times 709 \times 8663$$

→ This equation enables the computation of $\log(8663)$

$$\Rightarrow 4568 \times 10^4 - 1 = 5273 \times 8663$$

→ This equation enables the computation of $\log(8663)$

$$\Rightarrow 3077 \times 10^7 + 1 = 3^2 \times 13 \times 23 \times 1319 \times 8669$$

→ This equation enables the computation of $\log(8669)$

$$\Rightarrow 4763 \times 10^6 + 1 = 3 \times 373 \times 491 \times 8669$$

→ This equation enables the computation of $\log(8669)$

page 504:

$$\Rightarrow 7172 \times 10^7 + 1 = 3^2 \times 13 \times 241 \times 293 \times 8681$$

→ This equation enables the computation of $\log(8681)$

$$\Rightarrow 5358 \times 10^5 + 1 = 11 \times 31 \times 181 \times 8681$$

→ This equation enables the computation of $\log(8681)$

$$\Rightarrow 8123 \times 10^5 - 1 = 7^2 \times 1907 \times 8693$$

→ This equation enables the computation of $\log(8693)$

$$\Rightarrow 57 \times 10^6 + 1 = 79 \times 83 \times 8693$$

→ This equation enables the computation of $\log(8693)$

$$\Rightarrow 6634 \times 10^7 - 1 = 3^3 \times 7^2 \times 13 \times 443 \times 8707$$

→ This equation enables the computation of $\log(8707)$

$$\Rightarrow 5391 \times 10^6 - 1 = 7 \times 11^2 \times 17 \times 43 \times 8707$$

→ This equation enables the computation of $\log(8707)$

page 505:

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $5408 \times 10^6 - 1 = 17 \times 41 \times 881 \times 8807$
→ This equation enables the computation of $\log(8807)$
- ⇒ $7569 \times 10^5 + 1 = 11 \times 13 \times 601 \times 8807$
→ This equation enables the computation of $\log(8807)$
- ⇒ $7294 \times 10^7 + 1 = 11 \times 107 \times 7027 \times 8819$
→ This equation enables the computation of $\log(8819)$
- ⇒ $1525 \times 10^7 - 1 = 3 \times 13 \times 101 \times 439 \times 8819$
→ This equation enables the computation of $\log(8819)$
- ⇒ $2048 \times 10^6 - 1 = 311 \times 743 \times 8863$
→ This equation enables the computation of $\log(8863)$
- ⇒ $2754 \times 10^5 - 1 = 7 \times 23 \times 193 \times 8863$
→ This equation enables the computation of $\log(8863)$

page 506:

- ⇒ $4931 \times 10^7 + 1 = 3^2 \times 593 \times 1019 \times 9067$
→ This equation enables the computation of $\log(9067)$
- ⇒ $5092 \times 10^6 - 1 = 3 \times 131 \times 1429 \times 9067$
→ This equation enables the computation of $\log(9067)$
- ⇒ $1682 \times 10^8 + 1 = 3^2 \times 11 \times 19 \times 43 \times 227 \times 9161$
→ This equation enables the computation of $\log(9161)$
- ⇒ $5859 \times 10^6 - 1 = 19 \times 41 \times 821 \times 9161$
→ This equation enables the computation of $\log(9161)$
- ⇒ $6388 \times 10^7 - 1 = 3 \times 1033 \times 2221 \times 9281$
→ This equation enables the computation of $\log(9281)$
- ⇒ $6786 \times 10^8 + 1 = 7 \times 11 \times 571 \times 1663 \times 9281$
→ This equation enables the computation of $\log(9281)$

page 507:

- ⇒ $6667 \times 10^5 + 1 = 11 \times 6871 \times 8821$
→ This equation enables the computation of $\log(8821)$
- ⇒ $2315 \times 10^7 - 1 = 7 \times 43 \times 8821 \times 8719$
→ This equation enables the computation of $\log(8719)$
- ⇒ $4806 \times 10^5 - 1 = 11 \times 5011 \times 8719$
→ This equation enables the computation of $\log(8719)$
- ⇒ $939 \times 10^5 + 1 = 13 \times 829 \times 8713$
→ This equation enables the computation of $\log(8713)$
- ⇒ $8036 \times 10^4 - 1 = 23 \times 401 \times 8713$
→ This equation enables the computation of $\log(8713)$
- ⇒ $6087 \times 10^6 + 1 = 149 \times 4679 \times 8731$
→ This equation enables the computation of $\log(8731)$

page 508:

- ⇒ $6261 \times 10^4 + 1 = 71 \times 101 \times 8731$
→ This equation enables the computation of $\log(8731)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $6616 \times 10^9 - 1 = 3^3 \times 13 \times 23 \times 97 \times 967 \times 8737$
→ This equation enables the computation of $\log(8737)$
- ⇒ $6325 \times 10^7 - 1 = 3 \times 433 \times 5573 \times 8737$
→ This equation enables the computation of $\log(8737)$
- ⇒ $5345 \times 10^7 + 1 = 3^2 \times 659 \times 1031 \times 8741$
→ This equation enables the computation of $\log(8741)$
- ⇒ $7442 \times 10^5 - 1 = 19 \times 4481 \times 8741$
→ This equation enables the computation of $\log(8741)$
- ⇒ $6491 \times 10^6 + 1 = 3 \times 19 \times 47 \times 277 \times 8747$
→ This equation enables the computation of $\log(8747)$

page 509:

- ⇒ $6925 \times 10^4 - 1 = 3 \times 7 \times 13 \times 29 \times 8747$
→ This equation enables the computation of $\log(8747)$
- ⇒ $7235 \times 10^7 + 1 = 3^2 \times 17 \times 83 \times 631 \times 9029$
→ This equation enables the computation of $\log(9029)$
- ⇒ $1794 \times 10^7 - 1 = 227 \times 9029 \times 8753$
→ This equation enables the computation of $\log(8753)$
- ⇒ $6959 \times 10^7 + 1 = 3 \times 19 \times 101 \times 1381 \times 8753$
→ This equation enables the computation of $\log(8753)$
- ⇒ $2497 \times 10^7 - 1 = 3 \times 7 \times 293 \times 461 \times 8803$
→ This equation enables the computation of $\log(8803)$
- ⇒ $7364 \times 10^6 - 1 = 23 \times 37 \times 983 \times 8803$
→ This equation enables the computation of $\log(8803)$
- ⇒ $1405 \times 10^6 - 1 = 3^5 \times 13 \times 47 \times 9463$
→ This equation enables the computation of $\log(9463)$

page 510:

- ⇒ $4872 \times 10^7 - 1 = 11 \times 53 \times 9463 \times 8831$
→ This equation enables the computation of $\log(8831)$
- ⇒ $1495 \times 10^5 - 1 = 3^4 \times 11 \times 19 \times 8831$
→ This equation enables the computation of $\log(8831)$
- ⇒ $3293 \times 10^9 + 1 = 3^3 \times 17 \times 157 \times 5171 \times 8837$
→ This equation enables the computation of $\log(8837)$
- ⇒ $5636 \times 10^6 + 1 = 3 \times 19 \times 67 \times 167 \times 8837$
→ This equation enables the computation of $\log(8837)$
- ⇒ $527 \times 10^7 + 1 = 3 \times 7 \times 127 \times 223 \times 8861$
→ This equation enables the computation of $\log(8861)$
- ⇒ $3591 \times 10^6 - 1 = 181 \times 2239 \times 8861$
→ This equation enables the computation of $\log(8861)$

page 511:

- ⇒ $1669 \times 10^7 + 1 = 47 \times 73 \times 547 \times 8893$
→ This equation enables the computation of $\log(8893)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $7797 \times 10^6 + 1 = 7^2 \times 29 \times 617 \times 8893$
→ This equation enables the computation of $\log(8893)$
- ⇒ $439 \times 10^7 + 1 = 373 \times 1319 \times 8923$
→ This equation enables the computation of $\log(8923)$
- ⇒ $8208 \times 10^5 + 1 = 7 \times 17 \times 773 \times 8923$
→ This equation enables the computation of $\log(8923)$
- ⇒ $8743 \times 10^6 + 1 = 577 \times 1697 \times 8929$
→ This equation enables the computation of $\log(8929)$
- ⇒ $7069 \times 10^5 + 1 = 17 \times 4657 \times 8929$
→ This equation enables the computation of $\log(8929)$

page 512:

- ⇒ $173 \times 10^{10} + 1 = 3 \times 7^2 \times 13 \times 19 \times 73^2 \times 8941$
→ This equation enables the computation of $\log(8941)$
- ⇒ $3121 \times 10^7 + 1 = 17 \times 19 \times 101 \times 107 \times 8941$
→ This equation enables the computation of $\log(8941)$
- ⇒ $7402 \times 10^7 - 1 = 3 \times 11 \times 17 \times 47 \times 313 \times 8969$
→ This equation enables the computation of $\log(8969)$
- ⇒ $6701 \times 10^6 + 1 = 3 \times 337 \times 739 \times 8969$
→ This equation enables the computation of $\log(8969)$
- ⇒ $7436 \times 10^7 + 1 = 3 \times 7 \times 73 \times 5407 \times 8971$
→ This equation enables the computation of $\log(8971)$
- ⇒ $6379 \times 10^6 - 1 = 3 \times 421 \times 563 \times 8971$
→ This equation enables the computation of $\log(8971)$
- ⇒ $7649 \times 10^7 - 1 = 7 \times 239 \times 5101 \times 8963$
→ This equation enables the computation of $\log(8963)$

page 513:

- ⇒ $4786 \times 10^6 - 1 = 3 \times 11^2 \times 1471 \times 8963$
→ This equation enables the computation of $\log(8963)$
- ⇒ $8287 \times 10^5 + 1 = 71 \times 1319 \times 8849$
→ This equation enables the computation of $\log(8849)$
- ⇒ $562 \times 10^5 - 1 = 3 \times 29 \times 73 \times 8849$
→ This equation enables the computation of $\log(8849)$
- ⇒ $6724 \times 10^8 - 1 = 3^2 \times 7 \times 13 \times 179 \times 509 \times 9011$
→ This equation enables the computation of $\log(9011)$
- ⇒ $4163 \times 10^7 - 1 = 7 \times 163 \times 4049 \times 9011$
→ This equation enables the computation of $\log(9011)$
- ⇒ $7783 \times 10^7 + 1 = 13 \times 191 \times 3467 \times 9041$
→ This equation enables the computation of $\log(9041)$

page 514:

- ⇒ $1258 \times 10^7 - 1 = 3 \times 7 \times 173 \times 383 \times 9041$
→ This equation enables the computation of $\log(9041)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $1097 \times 10^7 - 1 = 7^2 \times 19 \times 1303 \times 9043$
 → This equation enables the computation of $\log(9043)$
- ⇒ $7946 \times 10^7 + 1 = 3^3 \times 503 \times 647 \times 9043$
 → This equation enables the computation of $\log(9043)$
- ⇒ $2974 \times 10^7 - 1 = 3 \times 67 \times 83 \times 197 \times 9049$
 → This equation enables the computation of $\log(9049)$
- ⇒ $6456 \times 10^6 + 1 = 11 \times 79 \times 821 \times 9049$
 → This equation enables the computation of $\log(9049)$
- ⇒ $2555 \times 10^7 + 1 = 3^2 \times 181 \times 1723 \times 9103$
 → This equation enables the computation of $\log(9103)$
- ⇒ $7344 \times 10^6 + 1 = 13 \times 229 \times 271 \times 9103$
 → This equation enables the computation of $\log(9103)$

page 515:

- ⇒ $8692 \times 10^7 - 1 = 3 \times 7^2 \times 139 \times 467 \times 9109$
 → This equation enables the computation of $\log(9109)$
- ⇒ $4939 \times 10^6 - 1 = 3 \times 149 \times 1213 \times 9109$
 → This equation enables the computation of $\log(9109)$
- ⇒ $8009 \times 10^7 + 1 = 3^2 \times 11 \times 151 \times 587 \times 9127$
 → This equation enables the computation of $\log(9127)$
- ⇒ $2053 \times 10^6 - 1 = 3^4 \times 2777 \times 9127$
 → This equation enables the computation of $\log(9127)$
- ⇒ $1982 \times 10^9 + 1 = 3 \times 7 \times 31 \times 59 \times 5639 \times 9151$
 → This equation enables the computation of $\log(9151)$
- ⇒ $6029 \times 10^7 + 1 = 3^3 \times 7 \times 11 \times 3169 \times 9151$
 → This equation enables the computation of $\log(9151)$

page 516:

- ⇒ $8876 \times 10^8 + 1 = 3 \times 11 \times 13 \times 47 \times 4799 \times 9173$
 → This equation enables the computation of $\log(9173)$
- ⇒ $6992 \times 10^6 + 1 = 3^3 \times 7 \times 37 \times 109 \times 9173$
 → This equation enables the computation of $\log(9173)$
- ⇒ $6802 \times 10^7 - 1 = 3 \times 7 \times 71 \times 4969 \times 9181$
 → This equation enables the computation of $\log(9181)$
- ⇒ $2379 \times 10^7 + 1 = 37 \times 59 \times 1187 \times 9181$
 → This equation enables the computation of $\log(9181)$
- ⇒ $7592 \times 10^7 + 1 = 3 \times 17 \times 191 \times 853 \times 9137$
 → This equation enables the computation of $\log(9137)$
- ⇒ $829 \times 10^5 + 1 = 43 \times 211 \times 9137$
 → This equation enables the computation of $\log(9137)$
- ⇒ $1693 \times 10^9 - 1 = 3^2 \times 7 \times 11 \times 463 \times 557 \times 9473$
 → This equation enables the computation of $\log(9473)$

page 517:

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $8259 \times 10^7 - 1 = 13 \times 73 \times 9473 \times 9187$
→ This equation enables the computation of $\log(9187)$
- ⇒ $93 \times 10^6 + 1 = 53 \times 191 \times 9187$
→ This equation enables the computation of $\log(9187)$
- ⇒ $3035 \times 10^7 + 1 = 3 \times 461 \times 2383 \times 9209$
→ This equation enables the computation of $\log(9209)$
- ⇒ $6486 \times 10^6 - 1 = 19^2 \times 1951 \times 9209$
→ This equation enables the computation of $\log(9209)$
- ⇒ $5799 \times 10^8 + 1 = 7 \times 37 \times 151 \times 1607 \times 9227$
→ This equation enables the computation of $\log(9227)$
- ⇒ $6599 \times 10^7 - 1 = 7 \times 11 \times 293 \times 317 \times 9227$
→ This equation enables the computation of $\log(9227)$

page 518:

- ⇒ $2694 \times 10^5 + 1 = 13 \times 2243 \times 9239$
→ This equation enables the computation of $\log(9239)$
- ⇒ $8462 \times 10^4 + 1 = 3 \times 43 \times 71 \times 9239$
→ This equation enables the computation of $\log(9239)$
- ⇒ $4778 \times 10^8 + 1 = 3^2 \times 17 \times 29 \times 43 \times 271 \times 9241$
→ This equation enables the computation of $\log(9241)$
- ⇒ $6509 \times 10^6 + 1 = 3 \times 7 \times 17 \times 1973 \times 9241$
→ This equation enables the computation of $\log(9241)$
- ⇒ $7164 \times 10^5 - 1 = 7 \times 97 \times 113 \times 9337$
→ This equation enables the computation of $\log(9337)$
- ⇒ $2173 \times 10^5 + 1 = 17 \times 37^2 \times 9337$
→ This equation enables the computation of $\log(9337)$

page 519:

- ⇒ $8646 \times 10^7 + 1 = 17 \times 83 \times 6581 \times 9311$
→ This equation enables the computation of $\log(9311)$
- ⇒ $1323 \times 10^5 - 1 = 13 \times 1093 \times 9311$
→ This equation enables the computation of $\log(9311)$
- ⇒ $2165 \times 10^7 - 1 = 1297 \times 1787 \times 9341$
→ This equation enables the computation of $\log(9341)$
- ⇒ $6373 \times 10^6 + 1 = 17 \times 67 \times 599 \times 9341$
→ This equation enables the computation of $\log(9341)$
- ⇒ $6187 \times 10^6 + 1 = 7 \times 13 \times 19 \times 383 \times 9343$
→ This equation enables the computation of $\log(9343)$
- ⇒ $8564 \times 10^8 + 1 = 3 \times 7 \times 13 \times 71 \times 4729 \times 9343$
→ This equation enables the computation of $\log(9343)$

page 520:

- ⇒ $613 \times 10^8 - 1 = 3^2 \times 7 \times 199 \times 523 \times 9349$
→ This equation enables the computation of $\log(9349)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $5206 \times 10^6 - 1 = 3 \times 419 \times 443 \times 9349$
 → This equation enables the computation of $\log(9349)$
- ⇒ $2003 \times 10^9 + 1 = 3 \times 7 \times 11 \times 13 \times 109 \times 653 \times 9371$
 → This equation enables the computation of $\log(9371)$
- ⇒ $3509 \times 10^7 + 1 = 3^2 \times 7^3 \times 1213 \times 9371$
 → This equation enables the computation of $\log(9371)$
- ⇒ $595 \times 10^8 + 1 = 13 \times 479 \times 1019 \times 9377$
 → This equation enables the computation of $\log(9377)$
- ⇒ $6139 \times 10^6 - 1 = 3^2 \times 11 \times 17 \times 389 \times 9377$
 → This equation enables the computation of $\log(9377)$
- ⇒ $1553 \times 10^7 + 1 = 3 \times 59 \times 9343 \times 9391$
 → This equation enables the computation of $\log(9391)$

page 521:

- ⇒ $5044 \times 10^5 + 1 = 7 \times 7673 \times 9391$
 → This equation enables the computation of $\log(9391)$
- ⇒ $6487 \times 10^7 - 1 = 3 \times 7^2 \times 151 \times 311 \times 9397$
 → This equation enables the computation of $\log(9397)$
- ⇒ $909 \times 10^6 + 1 = 7 \times 13 \times 1063 \times 9397$
 → This equation enables the computation of $\log(9397)$
- ⇒ $6867 \times 10^6 - 1 = 31 \times 101 \times 233 \times 9413$
 → This equation enables the computation of $\log(9413)$
- ⇒ $2546 \times 10^6 + 1 = 3^2 \times 41 \times 733 \times 9413$
 → This equation enables the computation of $\log(9413)$
- ⇒ $8461 \times 10^4 + 1 = 7 \times 1283 \times 9421$
 → This equation enables the computation of $\log(9421)$

page 522:

- ⇒ $7159 \times 10^7 + 1 = 13 \times 41 \times 53 \times 269 \times 9421$
 → This equation enables the computation of $\log(9421)$
- ⇒ $1715 \times 10^7 + 1 = 3 \times 19 \times 61 \times 523 \times 9431$
 → This equation enables the computation of $\log(9431)$
- ⇒ $7719 \times 10^6 + 1 = 383 \times 2137 \times 9431$
 → This equation enables the computation of $\log(9431)$
- ⇒ $2312 \times 10^6 + 1 = 3^2 \times 113 \times 241 \times 9433$
 → This equation enables the computation of $\log(9433)$
- ⇒ $4254 \times 10^5 + 1 = 13 \times 3469 \times 9433$
 → This equation enables the computation of $\log(9433)$
- ⇒ $7477 \times 10^6 - 1 = 3 \times 7 \times 103 \times 367 \times 9419$
 → This equation enables the computation of $\log(9419)$

page 523:

- ⇒ $8837 \times 10^5 - 1 = 7 \times 13 \times 1031 \times 9419$
 → This equation enables the computation of $\log(9419)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $381 \times 10^6 + 1 = 47 \times 859 \times 9437$
→ This equation enables the computation of $\log(9437)$
- ⇒ $9085 \times 10^4 - 1 = 3 \times 3209 \times 9437$
→ This equation enables the computation of $\log(9437)$
- ⇒ $5631 \times 10^6 + 1 = 11 \times 23 \times 2351 \times 9467$
→ This equation enables the computation of $\log(9467)$
- ⇒ $3836 \times 10^6 - 1 = 13 \times 71 \times 439 \times 9467$
→ This equation enables the computation of $\log(9467)$
- ⇒ $7703 \times 10^6 + 1 = 3^2 \times 31 \times 2909 \times 9491$
→ This equation enables the computation of $\log(9491)$

page 524:

- ⇒ $8389 \times 10^5 - 1 = 3^2 \times 7 \times 23 \times 61 \times 9491$
→ This equation enables the computation of $\log(9491)$
- ⇒ $7803 \times 10^7 - 1 = 7 \times 347 \times 3389 \times 9479$
→ This equation enables the computation of $\log(9479)$
- ⇒ $1676 \times 10^7 + 1 = 3 \times 17 \times 37 \times 937 \times 9479$
→ This equation enables the computation of $\log(9479)$
- ⇒ $6517 \times 10^7 - 1 = 3^2 \times 13 \times 89 \times 659 \times 9497$
→ This equation enables the computation of $\log(9497)$
- ⇒ $8188 \times 10^6 - 1 = 3 \times 59 \times 4871 \times 9497$
→ This equation enables the computation of $\log(9497)$
- ⇒ $9122 \times 10^4 + 1 = 3 \times 23 \times 139 \times 9511$
→ This equation enables the computation of $\log(9511)$
- ⇒ $99 \times 10^6 - 1 = 7 \times 1487 \times 9511$
→ This equation enables the computation of $\log(9511)$

page 525:

- ⇒ $6273 \times 10^5 - 1 = 23 \times 2861 \times 9533$
→ This equation enables the computation of $\log(9533)$
- ⇒ $1874 \times 10^7 - 1 = 7 \times 31 \times 9059 \times 9533$
→ This equation enables the computation of $\log(9533)$
- ⇒ $3385 \times 10^6 + 1 = 233 \times 1523 \times 9539$
→ This equation enables the computation of $\log(9539)$
- ⇒ $8508 \times 10^5 - 1 = 7 \times 29 \times 439 \times 9547$
→ This equation enables the computation of $\log(9547)$
- ⇒ $6154 \times 10^6 - 1 = 3 \times 7 \times 31 \times 991 \times 9539$
→ This equation enables the computation of $\log(9539)$
- ⇒ $6579 \times 10^6 - 1 = 11 \times 13 \times 61 \times 79 \times 9547$
→ This equation enables the computation of $\log(9547)$

page 526:

- ⇒ $8799 \times 10^6 - 1 = 601 \times 1523 \times 9613$
→ This equation enables the computation of $\log(9613)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $7609 \times 10^7 - 1 = 3 \times 13 \times 31 \times 6547 \times 9613$
→ This equation enables the computation of $\log(9613)$
- ⇒ $34 \times 10^6 - 1 = 3 \times 11 \times 107 \times 9629$
→ This equation enables the computation of $\log(9629)$
- ⇒ $6229 \times 10^4 + 1 = 6469 \times 9629$
→ This equation enables the computation of $\log(9629)$
- ⇒ $2983 \times 10^6 - 1 = 3 \times 7^4 \times 43 \times 9631$
→ This equation enables the computation of $\log(9631)$
- ⇒ $937 \times 10^5 - 1 = 3^2 \times 23 \times 47 \times 9631$
→ This equation enables the computation of $\log(9631)$

page 527:

- ⇒ $2676 \times 10^6 + 1 = 359 \times 773 \times 9643$
→ This equation enables the computation of $\log(9643)$
- ⇒ $7982 \times 10^7 + 1 = 3^2 \times 7 \times 83 \times 1583 \times 9643$
→ This equation enables the computation of $\log(9643)$
- ⇒ $9604 \times 10^4 + 1 = 9941 \times 9661$
→ This equation enables the computation of $\log(9661)$
- ⇒ $3574 \times 10^6 + 1 = 11 \times 13^2 \times 199 \times 9661$
→ This equation enables the computation of $\log(9661)$
- ⇒ $6625 \times 10^6 + 1 = 359 \times 1907 \times 9677$
→ This equation enables the computation of $\log(9677)$
- ⇒ $8188 \times 10^5 + 1 = 191 \times 443 \times 9677$
→ This equation enables the computation of $\log(9677)$

page 528:

- ⇒ $9199 \times 10^7 - 1 = 3^3 \times 83 \times 4241 \times 9679$
→ This equation enables the computation of $\log(9679)$
- ⇒ $48 \times 10^8 + 1 = 19 \times 43 \times 607 \times 9679$
→ This equation enables the computation of $\log(9679)$
- ⇒ $172 \times 10^8 + 1 = 23 \times 79 \times 977 \times 9689$
→ This equation enables the computation of $\log(9689)$
- ⇒ $2178 \times 10^6 - 1 = 7 \times 17 \times 1889 \times 9689$
→ This equation enables the computation of $\log(9689)$
- ⇒ $4267 \times 10^6 + 1 = 11 \times 109 \times 367 \times 9697$
→ This equation enables the computation of $\log(9697)$
- ⇒ $5815 \times 10^5 - 1 = 3^3 \times 2221 \times 9697$
→ This equation enables the computation of $\log(9697)$

page 529:

- ⇒ $1656 \times 10^7 + 1 = 761 \times 2239 \times 9719$
→ This equation enables the computation of $\log(9719)$
- ⇒ $6841 \times 10^6 + 1 = 11 \times 61 \times 1049 \times 9719$
→ This equation enables the computation of $\log(9719)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $7597 \times 10^7 - 1 = 3^2 \times 67^2 \times 193 \times 9743$
→ This equation enables the computation of $\log(9743)$
- ⇒ $7769 \times 10^6 - 1 = 199 \times 4007 \times 9743$
→ This equation enables the computation of $\log(9743)$
- ⇒ $7826 \times 10^6 + 1 = 3 \times 29 \times 9227 \times 9749$
→ This equation enables the computation of $\log(9749)$
- ⇒ $1923 \times 10^6 - 1 = 17 \times 41 \times 283 \times 9749$
→ This equation enables the computation of $\log(9749)$
- ⇒ $428 \times 10^8 + 1 = 3 \times 11 \times 19 \times 29 \times 241 \times 9767$
→ This equation enables the computation of $\log(9767)$

page 530:

- ⇒ $6035 \times 10^6 - 1 = 7 \times 103 \times 857 \times 9767$
→ This equation enables the computation of $\log(9767)$
- ⇒ $6442 \times 10^7 + 1 = 7 \times 167 \times 5641 \times 9769$
→ This equation enables the computation of $\log(9769)$
- ⇒ $3963 \times 10^6 - 1 = 7^2 \times 17 \times 487 \times 9769$
→ This equation enables the computation of $\log(9769)$
- ⇒ $9325 \times 10^6 - 1 = 3^2 \times 7 \times 37 \times 409 \times 9781$
→ This equation enables the computation of $\log(9781)$
- ⇒ $5221 \times 10^5 - 1 = 3^4 \times 659 \times 9781$
→ This equation enables the computation of $\log(9781)$
- ⇒ $7838 \times 10^7 + 1 = 3^4 \times 23 \times 4297 \times 9791$
→ This equation enables the computation of $\log(9791)$

page 531:

- ⇒ $1953 \times 10^7 - 1 = 577 \times 3457 \times 9791$
→ This equation enables the computation of $\log(9791)$
- ⇒ $3752 \times 10^9 + 1 = 3^3 \times 11 \times 17 \times 59 \times 1283 \times 9817$
→ This equation enables the computation of $\log(9817)$
- ⇒ $7911 \times 10^6 - 1 = 7 \times 19 \times 73 \times 83 \times 9817$
→ This equation enables the computation of $\log(9817)$
- ⇒ $8245 \times 10^6 - 1 = 3^2 \times 151 \times 617 \times 9833$
→ This equation enables the computation of $\log(9833)$
- ⇒ $6047 \times 10^5 + 1 = 3^2 \times 6833 \times 9833$
→ This equation enables the computation of $\log(9833)$
- ⇒ $9289 \times 10^4 - 1 = 3^2 \times 1049 \times 9839$
→ This equation enables the computation of $\log(9839)$
- ⇒ $9784 \times 10^5 - 1 = 3^3 \times 29 \times 127 \times 9839$
→ This equation enables the computation of $\log(9839)$

page 532:

- ⇒ $1356 \times 10^6 + 1 = 179 \times 769 \times 9851$
→ This equation enables the computation of $\log(9851)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $6142 \times 10^5 - 1 = 3 \times 7 \times 2969 \times 9851$
→ This equation enables the computation of $\log(9851)$
- ⇒ $4482 \times 10^5 - 1 = 13^2 \times 269 \times 9859$
→ This equation enables the computation of $\log(9859)$
- ⇒ $5384 \times 10^4 - 1 = 43 \times 127 \times 9859$
→ This equation enables the computation of $\log(9859)$
- ⇒ $805 \times 10^6 - 1 = 3 \times 19 \times 1429 \times 9883$
→ This equation enables the computation of $\log(9883)$

page 533:

- ⇒ $8447 \times 10^4 + 1 = 3 \times 7 \times 11 \times 37 \times 9883$
→ This equation enables the computation of $\log(9883)$
- ⇒ $247 \times 10^7 + 1 = 7 \times 89 \times 401 \times 9887$
→ This equation enables the computation of $\log(9887)$
- ⇒ $7417 \times 10^6 - 1 = 3^2 \times 19 \times 41 \times 107 \times 9887$
→ This equation enables the computation of $\log(9887)$
- ⇒ $5452 \times 10^9 - 1 = 3 \times 7 \times 19 \times 59 \times 97 \times 241 \times 9907$
→ This equation enables the computation of $\log(9907)$
- ⇒ $8128 \times 10^5 + 1 = 13 \times 6311 \times 9907$
→ This equation enables the computation of $\log(9907)$
- ⇒ $7325 \times 10^7 + 1 = 3^3 \times 29 \times 9403 \times 9949$
→ This equation enables the computation of $\log(9949)$
- ⇒ $6342 \times 10^6 - 1 = 79 \times 8069 \times 9949$
→ This equation enables the computation of $\log(9949)$

page 534:

- ⇒ $4017 \times 10^5 + 1 = 41 \times 983 \times 9967$
→ This equation enables the computation of $\log(9967)$
- ⇒ $595 \times 10^6 - 1 = 3^4 \times 11 \times 67 \times 9967$
→ This equation enables the computation of $\log(9967)$
- ⇒ $3338 \times 10^7 + 1 = 3^2 \times 383 \times 971 \times 9973$
→ This equation enables the computation of $\log(9973)$
- ⇒ $6512 \times 10^6 - 1 = 157 \times 4159 \times 9973$
→ This equation enables the computation of $\log(9973)$
- ⇒ $5609 \times 10^7 + 1 = 3 \times 7 \times 449 \times 599 \times 9931$
→ This equation enables the computation of $\log(9931)$
- ⇒ $4322 \times 10^7 - 1 = 11 \times 383 \times 1033 \times 9931$
→ This equation enables the computation of $\log(9931)$

page 535:

- ⇒ $7642 \times 10^5 - 1 = 3^2 \times 43 \times 199 \times 9923$
→ This equation enables the computation of $\log(9923)$
- ⇒ $2281 \times 10^5 + 1 = 127 \times 181 \times 9923$
→ This equation enables the computation of $\log(9923)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- $\Rightarrow 5777 \times 10^6 - 1 = 23 \times 41 \times 617 \times 9929$
→ This equation enables the computation of $\log(9929)$
- $\Rightarrow 8111 \times 10^4 + 1 = 3 \times 7 \times 389 \times 9929$
→ This equation enables the computation of $\log(9929)$

page 537:

- $\Rightarrow 7018 \times 10^4 + 1 = 31 \times 227 \times 9973$
→ This equation enables the computation of $\log(9973)$
- $\Rightarrow 9665 \times 10^4 - 1 = 9697 \times 9967$
→ This equation enables the computation of $\log(9967)$
- $\Rightarrow 3607 \times 10^6 + 1 = 11 \times 23 \times 1433 \times 9949$
→ This equation enables the computation of $\log(9949)$
- $\Rightarrow 6435 \times 10^6 + 1 = 577 \times 1123 \times 9931$
→ This equation enables the computation of $\log(9931)$

page 538:

- $\Rightarrow 1818 \times 10^4 - 1 = 1831 \times 9929$
→ This equation enables the computation of $\log(9929)$
- $\Rightarrow 9712 \times 10^4 + 1 = 11 \times 19 \times 47 \times 9887$
→ This equation enables the computation of $\log(9887)$
- $\Rightarrow 99 \times 10^8 - 1 = 307 \times 3257 \times 9901$
→ This equation enables the computation of $\log(9901)$
- $\Rightarrow 6959 \times 10^4 - 1 = 7013 \times 9923$
→ This equation enables the computation of $\log(9923)$
- $\Rightarrow 7883 \times 10^4 - 1 = 73 \times 109 \times 9907$
→ This equation enables the computation of $\log(9907)$

page 539:

- $\Rightarrow 5437 \times 10^8 - 1 = 3^4 \times 13 \times 79 \times 653 \times 10009$
→ This equation enables the computation of $\log(10009)$
- $\Rightarrow 3214 \times 10^6 - 1 = 3^3 \times 7 \times 1699 \times 10009$
→ This equation enables the computation of $\log(10009)$
- $\Rightarrow 3288 \times 10^5 - 1 = 11 \times 29 \times 103 \times 10007$
→ This equation enables the computation of $\log(10007)$
- $\Rightarrow 7148 \times 10^4 + 1 = 3 \times 2381 \times 10007$
→ This equation enables the computation of $\log(10007)$
- $\Rightarrow 2964 \times 10^4 - 1 = 31 \times 97 \times 9857$
→ This equation enables the computation of $\log(9857)$
- $\Rightarrow 6893 \times 10^4 + 1 = 3^3 \times 7 \times 37 \times 9857$
→ This equation enables the computation of $\log(9857)$

page 540:

- $\Rightarrow 1 \times 10^6 + 1 = 101 \times 9901$
→ This equation enables the computation of $\log(9901)$
- $\Rightarrow 1 \times 10^{10} - 1 = 3^2 \times 11 \times 41 \times 271 \times 9091$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(9091)$
- ⇒ $8182 \times 10^6 + 1 = 7 \times 19 \times 67 \times 101 \times 9091$
- This equation enables the computation of $\log(9091)$
- ⇒ $2011 \times 10^4 - 1 = 3 \times 7 \times 13 \times 19 \times 3877$
- This equation enables the computation of $\log(3877)$
- ⇒ $1866 \times 10^4 + 1 = 4813 \times 3877$
- This equation enables the computation of $\log(3877)$
- ⇒ $3192 \times 10^4 - 1 = 17 \times 557 \times 3371$
- This equation enables the computation of $\log(3371)$

page 541:

- ⇒ $3016 \times 10^5 - 1 = 3^2 \times 9941 \times 3371$
- This equation enables the computation of $\log(3371)$
- ⇒ $1436 \times 10^4 - 1 = 1453 \times 9883$
- This equation enables the computation of $\log(9883)$
- ⇒ $4475 \times 10^4 + 1 = 3 \times 17 \times 89 \times 9859$
- This equation enables the computation of $\log(9859)$
- ⇒ $3709 \times 10^5 + 1 = 23 \times 1637 \times 9851$
- This equation enables the computation of $\log(9851)$
- ⇒ $55 \times 10^5 + 1 = 13 \times 43 \times 9839$
- This equation enables the computation of $\log(9839)$

page 542:

- ⇒ $3786 \times 10^5 - 1 = 139 \times 277 \times 9833$
- This equation enables the computation of $\log(9833)$
- ⇒ $6317 \times 10^5 + 1 = 3^2 \times 37 \times 193 \times 9829$
- This equation enables the computation of $\log(9829)$
- ⇒ $1906 \times 10^6 + 1 = 31 \times 6263 \times 9817$
- This equation enables the computation of $\log(9817)$
- ⇒ $462 \times 10^5 - 1 = 17 \times 277 \times 9811$
- This equation enables the computation of $\log(9811)$
- ⇒ $73 \times 10^7 + 1 = 113 \times 659 \times 9803$
- This equation enables the computation of $\log(9803)$

page 543:

- ⇒ $7122 \times 10^4 - 1 = 19 \times 383 \times 9787$
- This equation enables the computation of $\log(9787)$
- ⇒ $456 \times 10^6 + 1 = 23 \times 2027 \times 9781$
- This equation enables the computation of $\log(9781)$
- ⇒ $9215 \times 10^5 + 1 = 3^2 \times 47 \times 223 \times 9769$
- This equation enables the computation of $\log(9769)$
- ⇒ $9739 \times 10^6 - 1 = 3^2 \times 79 \times 1399 \times 9791$
- This equation enables the computation of $\log(9791)$
- ⇒ $8019 \times 10^5 + 1 = 7 \times 37 \times 317 \times 9767$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(9767)$
- ⇒ $9481 \times 10^5 - 1 = 3 \times 7 \times 11 \times 421 \times 9749$
- This equation enables the computation of $\log(9749)$

page 544:

- ⇒ $4493 \times 10^6 - 1 = 139 \times 3319 \times 9739$
- This equation enables the computation of $\log(9739)$
- ⇒ $9489 \times 10^5 - 1 = 17^2 \times 337 \times 9743$
- This equation enables the computation of $\log(9743)$
- ⇒ $2333 \times 10^4 + 1 = 3 \times 17 \times 47 \times 9733$
- This equation enables the computation of $\log(9733)$
- ⇒ $9342 \times 10^5 - 1 = 19 \times 5059 \times 9719$
- This equation enables the computation of $\log(9719)$
- ⇒ $395 \times 10^5 - 1 = 7 \times 11 \times 53 \times 9679$
- This equation enables the computation of $\log(9679)$
- ⇒ $9059 \times 10^4 - 1 = 9319 \times 9721$
- This equation enables the computation of $\log(9721)$

page 545:

- ⇒ $2402 \times 10^5 - 1 = 13 \times 1907 \times 9689$
- This equation enables the computation of $\log(9689)$
- ⇒ $1489 \times 10^5 - 1 = 3 \times 23 \times 223 \times 9677$
- This equation enables the computation of $\log(9677)$
- ⇒ $9718 \times 10^4 - 1 = 3 \times 7 \times 479 \times 9661$
- This equation enables the computation of $\log(9661)$
- ⇒ $2749 \times 10^4 + 1 = 7 \times 11 \times 37 \times 9649$
- This equation enables the computation of $\log(9649)$
- ⇒ $7474 \times 10^5 + 1 = 179 \times 433 \times 9643$
- This equation enables the computation of $\log(9643)$
- ⇒ $7021 \times 10^3 - 1 = 3^6 \times 9631$
- This equation enables the computation of $\log(9631)$

page 546:

- ⇒ $5113 \times 10^3 - 1 = 3^2 \times 59 \times 9629$
- This equation enables the computation of $\log(9629)$
- ⇒ $5577 \times 10^5 + 1 = 37 \times 1567 \times 9619$
- This equation enables the computation of $\log(9619)$
- ⇒ $814 \times 10^6 + 1 = 17^2 \times 293 \times 9613$
- This equation enables the computation of $\log(9613)$
- ⇒ $7278 \times 10^6 - 1 = 17^2 \times 2617 \times 9623$
- This equation enables the computation of $\log(9623)$
- ⇒ $1646 \times 10^6 + 1 = 3^3 \times 19 \times 337 \times 9521$
- This equation enables the computation of $\log(9521)$

page 547:

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $7594 \times 10^4 + 1 = 7951 \times 9551$
→ This equation enables the computation of $\log(9551)$
- ⇒ $8704 \times 10^4 - 1 = 3^2 \times 1013 \times 9547$
→ This equation enables the computation of $\log(9547)$
- ⇒ $4839 \times 10^5 + 1 = 13 \times 3877 \times 9601$
→ This equation enables the computation of $\log(9601)$
- ⇒ $5233 \times 10^5 + 1 = 7 \times 17 \times 461 \times 9539$
→ This equation enables the computation of $\log(9539)$
- ⇒ $5532 \times 10^4 - 1 = 7 \times 829 \times 9533$
→ This equation enables the computation of $\log(9533)$
- ⇒ $5621 \times 10^3 + 1 = 3 \times 197 \times 9511$
→ This equation enables the computation of $\log(9511)$

page 548:

- ⇒ $1309 \times 10^6 + 1 = 337 \times 409 \times 9497$
→ This equation enables the computation of $\log(9497)$
- ⇒ $6457 \times 10^5 + 1 = 17 \times 4007 \times 9479$
→ This equation enables the computation of $\log(9479)$
- ⇒ $1214 \times 10^7 + 1 = 3^2 \times 23 \times 41 \times 151 \times 9473$
→ This equation enables the computation of $\log(9473)$
- ⇒ $492 \times 10^5 - 1 = 5197 \times 9467$
→ This equation enables the computation of $\log(9467)$
- ⇒ $4876 \times 10^5 + 1 = 7 \times 17 \times 433 \times 9463$
→ This equation enables the computation of $\log(9463)$

page 549:

- ⇒ $581 \times 10^5 + 1 = 3 \times 23 \times 89 \times 9461$
→ This equation enables the computation of $\log(9461)$
- ⇒ $6328 \times 10^5 - 1 = 3^3 \times 13 \times 191 \times 9439$
→ This equation enables the computation of $\log(9439)$
- ⇒ $4625 \times 10^4 - 1 = 4903 \times 9433$
→ This equation enables the computation of $\log(9433)$
- ⇒ $1712 \times 10^6 - 1 = 167 \times 1087 \times 9431$
→ This equation enables the computation of $\log(9431)$
- ⇒ $96 \times 10^5 - 1 = 1019 \times 9421$
→ This equation enables the computation of $\log(9421)$
- ⇒ $582 \times 10^5 + 1 = 37 \times 167 \times 9419$
→ This equation enables the computation of $\log(9419)$

page 550:

- ⇒ $6634 \times 10^5 + 1 = 11 \times 43 \times 149 \times 9413$
→ This equation enables the computation of $\log(9413)$
- ⇒ $6327 \times 10^4 + 1 = 6733 \times 9397$
→ This equation enables the computation of $\log(9397)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $4347 \times 10^5 - 1 = 41 \times 1129 \times 9391$
→ This equation enables the computation of $\log(9391)$
- ⇒ $9789 \times 10^4 + 1 = 11 \times 23 \times 41 \times 9437$
→ This equation enables the computation of $\log(9437)$
- ⇒ $3238 \times 10^6 + 1 = 127 \times 2719 \times 9377$
→ This equation enables the computation of $\log(9377)$

page 551:

- ⇒ $5125 \times 10^4 - 1 = 3 \times 1823 \times 9371$
→ This equation enables the computation of $\log(9371)$
- ⇒ $4143 \times 10^6 + 1 = 7 \times 29 \times 37 \times 59 \times 9349$
→ This equation enables the computation of $\log(9349)$
- ⇒ $6281 \times 10^4 - 1 = 7 \times 31^2 \times 9337$
→ This equation enables the computation of $\log(9337)$
- ⇒ $5392 \times 10^4 + 1 = 5791 \times 9311$
→ This equation enables the computation of $\log(9311)$
- ⇒ $6651 \times 10^4 + 1 = 17 \times 421 \times 9293$
→ This equation enables the computation of $\log(9293)$
- ⇒ $8236 \times 10^6 - 1 = 3^3 \times 131 \times 251 \times 9277$
→ This equation enables the computation of $\log(9277)$

page 552:

- ⇒ $3975 \times 10^6 + 1 = 7^2 \times 23 \times 389 \times 9067$
→ This equation enables the computation of $\log(9067)$
- ⇒ $3664 \times 10^4 + 1 = 3947 \times 9283$
→ This equation enables the computation of $\log(9283)$
- ⇒ $8914 \times 10^5 - 1 = 3 \times 7 \times 29 \times 157 \times 9323$
→ This equation enables the computation of $\log(9323)$
- ⇒ $1657 \times 10^5 - 1 = 3^5 \times 73 \times 9341$
→ This equation enables the computation of $\log(9341)$
- ⇒ $2893 \times 10^7 + 1 = 7 \times 19 \times 23 \times 1019 \times 9281$
→ This equation enables the computation of $\log(9281)$
- ⇒ $5918 \times 10^4 + 1 = 3 \times 2131 \times 9257$
→ This equation enables the computation of $\log(9257)$

page 553:

- ⇒ $2732 \times 10^6 - 1 = 229 \times 1291 \times 9241$
→ This equation enables the computation of $\log(9241)$
- ⇒ $777 \times 10^4 - 1 = 29^2 \times 9239$
→ This equation enables the computation of $\log(9239)$
- ⇒ $8132 \times 10^4 - 1 = 8819 \times 9221$
→ This equation enables the computation of $\log(9221)$
- ⇒ $1963 \times 10^4 - 1 = 3^3 \times 79 \times 9203$
→ This equation enables the computation of $\log(9203)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $9074 \times 10^4 - 1 = 7 \times 17 \times 83 \times 9187$
→ This equation enables the computation of $\log(9187)$
- ⇒ $8812 \times 10^5 + 1 = 11 \times 8699 \times 9209$
→ This equation enables the computation of $\log(9209)$

page 554:

- ⇒ $5428 \times 10^6 + 1 = 593 \times 997 \times 9181$
→ This equation enables the computation of $\log(9181)$
- ⇒ $5709 \times 10^5 + 1 = 7 \times 17 \times 523 \times 9173$
→ This equation enables the computation of $\log(9173)$
- ⇒ $3302 \times 10^6 + 1 = 3^2 \times 29 \times 1381 \times 9161$
→ This equation enables the computation of $\log(9161)$
- ⇒ $7973 \times 10^4 - 1 = 8707 \times 9157$
→ This equation enables the computation of $\log(9157)$
- ⇒ $3767 \times 10^6 - 1 = 7^2 \times 31 \times 271 \times 9151$
→ This equation enables the computation of $\log(9151)$
- ⇒ $9984 \times 10^4 - 1 = 7^2 \times 223 \times 9137$
→ This equation enables the computation of $\log(9137)$

page 555:

- ⇒ $5264 \times 10^5 + 1 = 3^2 \times 6421 \times 9109$
→ This equation enables the computation of $\log(9109)$
- ⇒ $5681 \times 10^5 - 1 = 17 \times 3659 \times 9133$
→ This equation enables the computation of $\log(9133)$
- ⇒ $6851 \times 10^5 + 1 = 3 \times 131 \times 191 \times 9127$
→ This equation enables the computation of $\log(9127)$
- ⇒ $1759 \times 10^6 - 1 = 3 \times 41 \times 1571 \times 9103$
→ This equation enables the computation of $\log(9103)$
- ⇒ $7832 \times 10^5 - 1 = 41 \times 2111 \times 9049$
→ This equation enables the computation of $\log(9049)$

page 556:

- ⇒ $7859 \times 10^5 + 1 = 3 \times 59 \times 491 \times 9043$
→ This equation enables the computation of $\log(9043)$
- ⇒ $5502 \times 10^6 + 1 = 31 \times 67 \times 293 \times 9041$
→ This equation enables the computation of $\log(9041)$
- ⇒ $8911 \times 10^6 - 1 = 3^3 \times 11 \times 3323 \times 9029$
→ This equation enables the computation of $\log(9029)$
- ⇒ $5595 \times 10^5 + 1 = 23 \times 2699 \times 9013$
→ This equation enables the computation of $\log(9013)$
- ⇒ $3425 \times 10^6 + 1 = 3 \times 31 \times 61 \times 67 \times 9011$
→ This equation enables the computation of $\log(9011)$
- ⇒ $1656 \times 10^6 - 1 = 53 \times 3469 \times 9007$
→ This equation enables the computation of $\log(9007)$

page 557:

- ⇒ $1711 \times 10^8 - 1 = 3^4 \times 331 \times 709 \times 9001$
→ This equation enables the computation of $\log(9001)$
- ⇒ $908 \times 10^7 - 1 = 7 \times 17 \times 61 \times 139 \times 8999$
→ This equation enables the computation of $\log(8999)$
- ⇒ $5918 \times 10^5 + 1 = 3 \times 13 \times 1693 \times 8963$
→ This equation enables the computation of $\log(8963)$
- ⇒ $8106 \times 10^5 + 1 = 17 \times 5333 \times 8941$
→ This equation enables the computation of $\log(8941)$
- ⇒ $715 \times 10^5 - 1 = 3 \times 2671 \times 8923$
→ This equation enables the computation of $\log(8923)$
- ⇒ $2067 \times 10^5 - 1 = 11 \times 2113 \times 8893$
→ This equation enables the computation of $\log(8893)$

page 558:

- ⇒ $7978 \times 10^5 + 1 = 113 \times 787 \times 8971$
→ This equation enables the computation of $\log(8971)$
- ⇒ $4742 \times 10^5 - 1 = 7^2 \times 13 \times 83 \times 8969$
→ This equation enables the computation of $\log(8969)$
- ⇒ $4757 \times 10^6 - 1 = 19 \times 83 \times 337 \times 8951$
→ This equation enables the computation of $\log(8951)$
- ⇒ $8573 \times 10^4 + 1 = 3 \times 7 \times 457 \times 8933$
→ This equation enables the computation of $\log(8933)$
- ⇒ $8187 \times 10^4 + 1 = 53 \times 173 \times 8929$
→ This equation enables the computation of $\log(8929)$
- ⇒ $1882 \times 10^5 - 1 = 3^2 \times 13 \times 181 \times 8887$
→ This equation enables the computation of $\log(8887)$

page 559:

- ⇒ $8849 \times 10^5 - 1 = 23 \times 4339 \times 8867$
→ This equation enables the computation of $\log(8867)$
- ⇒ $7912 \times 10^4 + 1 = 79 \times 113 \times 8863$
→ This equation enables the computation of $\log(8863)$
- ⇒ $8395 \times 10^5 + 1 = 17 \times 5573 \times 8861$
→ This equation enables the computation of $\log(8861)$
- ⇒ $3229 \times 10^4 + 1 = 41 \times 89 \times 8849$
→ This equation enables the computation of $\log(8849)$
- ⇒ $6119 \times 10^4 - 1 = 13^2 \times 41 \times 8831$
→ This equation enables the computation of $\log(8831)$

page 560:

- ⇒ $4923 \times 10^4 + 1 = 5581 \times 8821$
→ This equation enables the computation of $\log(8821)$
- ⇒ $5234 \times 10^4 + 1 = 3 \times 7 \times 283 \times 8807$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(8807)$
- ⇒ $1439 \times 10^6 + 1 = 3^2 \times 41 \times 443 \times 8803$
- This equation enables the computation of $\log(8803)$
- ⇒ $689 \times 10^6 + 1 = 3 \times 79 \times 331 \times 8783$
- This equation enables the computation of $\log(8783)$
- ⇒ $5348 \times 10^6 - 1 = 31 \times 43 \times 457 \times 8779$
- This equation enables the computation of $\log(8779)$
- ⇒ $2489 \times 10^4 + 1 = 3 \times 947 \times 8761$
- This equation enables the computation of $\log(8761)$

page 561:

- ⇒ $8319 \times 10^6 + 1 = 13 \times 29 \times 2521 \times 8753$
- This equation enables the computation of $\log(8753)$
- ⇒ $1822 \times 10^4 + 1 = 2083 \times 8747$
- This equation enables the computation of $\log(8747)$
- ⇒ $1299 \times 10^5 + 1 = 7 \times 11 \times 193 \times 8741$
- This equation enables the computation of $\log(8741)$
- ⇒ $5301 \times 10^5 + 1 = 17 \times 43 \times 83 \times 8737$
- This equation enables the computation of $\log(8737)$
- ⇒ $247 \times 10^5 - 1 = 3 \times 23 \times 41 \times 8731$
- This equation enables the computation of $\log(8731)$
- ⇒ $7461 \times 10^4 - 1 = 23 \times 367 \times 8839$
- This equation enables the computation of $\log(8839)$

page 562:

- ⇒ $2993 \times 10^4 - 1 = 11 \times 313 \times 8693$
- This equation enables the computation of $\log(8693)$
- ⇒ $3805 \times 10^5 - 1 = 3 \times 11 \times 1327 \times 8689$
- This equation enables the computation of $\log(8689)$
- ⇒ $3323 \times 10^5 - 1 = 101 \times 379 \times 8681$
- This equation enables the computation of $\log(8681)$
- ⇒ $4384 \times 10^5 - 1 = 3^3 \times 1873 \times 8669$
- This equation enables the computation of $\log(8669)$
- ⇒ $677 \times 10^4 + 1 = 3 \times 7 \times 37 \times 8713$
- This equation enables the computation of $\log(8713)$

page 563:

- ⇒ $4465 \times 10^4 - 1 = 3^2 \times 569 \times 8719$
- This equation enables the computation of $\log(8719)$
- ⇒ $4652 \times 10^5 + 1 = 3^2 \times 7 \times 23 \times 37 \times 8677$
- This equation enables the computation of $\log(8677)$
- ⇒ $4095 \times 10^4 + 1 = 29 \times 163 \times 8663$
- This equation enables the computation of $\log(8663)$
- ⇒ $85 \times 10^5 + 1 = 983 \times 8647$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(8647)$
- ⇒ $6015 \times 10^4 + 1 = 6961 \times 8641$
- This equation enables the computation of $\log(8641)$
- ⇒ $4959 \times 10^5 + 1 = 101 \times 569 \times 8629$
- This equation enables the computation of $\log(8629)$

page 564:

- ⇒ $27 \times 10^7 + 1 = 17 \times 1847 \times 8599$
- This equation enables the computation of $\log(8599)$
- ⇒ $682 \times 10^5 + 1 = 7933 \times 8597$
- This equation enables the computation of $\log(8597)$
- ⇒ $4995 \times 10^4 + 1 = 5821 \times 8581$
- This equation enables the computation of $\log(8581)$
- ⇒ $4832 \times 10^5 - 1 = 157 \times 359 \times 8573$
- This equation enables the computation of $\log(8573)$
- ⇒ $3222 \times 10^5 + 1 = 191 \times 197 \times 8563$
- This equation enables the computation of $\log(8563)$
- ⇒ $7341 \times 10^4 - 1 = 13 \times 661 \times 8543$
- This equation enables the computation of $\log(8543)$

page 565:

- ⇒ $5526 \times 10^4 + 1 = 6473 \times 8537$
- This equation enables the computation of $\log(8537)$
- ⇒ $3016 \times 10^4 - 1 = 3^3 \times 131 \times 8527$
- This equation enables the computation of $\log(8527)$
- ⇒ $5634 \times 10^5 - 1 = 37 \times 1787 \times 8521$
- This equation enables the computation of $\log(8521)$
- ⇒ $1094 \times 10^5 + 1 = 3 \times 4229 \times 8623$
- This equation enables the computation of $\log(8623)$
- ⇒ $5003 \times 10^4 + 1 = 3^3 \times 7 \times 31 \times 8539$
- This equation enables the computation of $\log(8539)$

page 566:

- ⇒ $2914 \times 10^4 - 1 = 3 \times 7 \times 163 \times 8513$
- This equation enables the computation of $\log(8513)$
- ⇒ $4973 \times 10^5 - 1 = 7 \times 61 \times 137 \times 8501$
- This equation enables the computation of $\log(8501)$
- ⇒ $322 \times 10^5 + 1 = 3803 \times 8467$
- This equation enables the computation of $\log(8467)$
- ⇒ $9004 \times 10^4 - 1 = 3 \times 7^2 \times 71 \times 8627$
- This equation enables the computation of $\log(8627)$
- ⇒ $3689 \times 10^5 - 1 = 13 \times 3361 \times 8443$
- This equation enables the computation of $\log(8443)$
- ⇒ $4447 \times 10^5 - 1 = 3^2 \times 5869 \times 8419$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(8419)$

page 567:

$$\Rightarrow 7985 \times 10^4 + 1 = 3 \times 7 \times 11 \times 41 \times 8431$$

→ This equation enables the computation of $\log(8431)$

$$\Rightarrow 815 \times 10^5 + 1 = 3 \times 11 \times 293 \times 8429$$

→ This equation enables the computation of $\log(8429)$

$$\Rightarrow 2231 \times 10^5 + 1 = 3^5 \times 109 \times 8423$$

→ This equation enables the computation of $\log(8423)$

$$\Rightarrow 5497 \times 10^4 - 1 = 3 \times 7 \times 313 \times 8363$$

→ This equation enables the computation of $\log(8363)$

$$\Rightarrow 3458 \times 10^6 - 1 = 53 \times 73 \times 107 \times 8353$$

→ This equation enables the computation of $\log(8353)$

page 568:

$$\Rightarrow 3522 \times 10^5 - 1 = 17 \times 47 \times 53 \times 8317$$

→ This equation enables the computation of $\log(8317)$

$$\Rightarrow 5644 \times 10^4 + 1 = 6791 \times 8311$$

→ This equation enables the computation of $\log(8311)$

$$\Rightarrow 56 \times 10^6 - 1 = 11 \times 607 \times 8387$$

→ This equation enables the computation of $\log(8387)$

$$\Rightarrow 2633 \times 10^6 + 1 = 3 \times 17 \times 6163 \times 8377$$

→ This equation enables the computation of $\log(8377)$

$$\Rightarrow 6922 \times 10^4 - 1 = 3^2 \times 919 \times 8369$$

→ This equation enables the computation of $\log(8369)$

$$\Rightarrow 4805 \times 10^4 + 1 = 3^2 \times 641 \times 8329$$

→ This equation enables the computation of $\log(8329)$

page 569:

$$\Rightarrow 5239 \times 10^5 - 1 = 3^2 \times 7 \times 17 \times 59 \times 8291$$

→ This equation enables the computation of $\log(8291)$

$$\Rightarrow 1287 \times 10^7 - 1 = 19 \times 41 \times 1997 \times 8273$$

→ This equation enables the computation of $\log(8273)$

$$\Rightarrow 4861 \times 10^6 + 1 = 11 \times 13 \times 4099 \times 8293$$

→ This equation enables the computation of $\log(8293)$

$$\Rightarrow 7787 \times 10^5 - 1 = 7 \times 11 \times 1223 \times 8269$$

→ This equation enables the computation of $\log(8269)$

$$\Rightarrow 4021 \times 10^6 + 1 = 19 \times 23 \times 1109 \times 8297$$

→ This equation enables the computation of $\log(8297)$

$$\Rightarrow 3976 \times 10^4 - 1 = 3 \times 1609 \times 8237$$

→ This equation enables the computation of $\log(8237)$

page 570:

$$\Rightarrow 3631 \times 10^5 - 1 = 3 \times 61 \times 241 \times 8233$$

→ This equation enables the computation of $\log(8233)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $3035 \times 10^4 - 1 = 3673 \times 8263$
→ This equation enables the computation of $\log(8263)$
- ⇒ $5034 \times 10^4 + 1 = 31 \times 197 \times 8243$
→ This equation enables the computation of $\log(8243)$
- ⇒ $2287 \times 10^5 - 1 = 3^2 \times 11 \times 281 \times 8221$
→ This equation enables the computation of $\log(8221)$
- ⇒ $3629 \times 10^7 + 1 = 3 \times 23 \times 89 \times 719 \times 8219$
→ This equation enables the computation of $\log(8219)$

page 571:

- ⇒ $2718 \times 10^4 - 1 = 7 \times 11 \times 43 \times 8209$
→ This equation enables the computation of $\log(8209)$
- ⇒ $6642 \times 10^5 - 1 = 131 \times 619 \times 8191$
→ This equation enables the computation of $\log(8191)$
- ⇒ $6068 \times 10^4 + 1 = 3 \times 2473 \times 8179$
→ This equation enables the computation of $\log(8179)$
- ⇒ $5088 \times 10^5 - 1 = 73 \times 853 \times 8171$
→ This equation enables the computation of $\log(8171)$
- ⇒ $5311 \times 10^4 + 1 = 7 \times 929 \times 8167$
→ This equation enables the computation of $\log(8167)$
- ⇒ $6985 \times 10^4 - 1 = 3^3 \times 317 \times 8161$
→ This equation enables the computation of $\log(8161)$

page 572:

- ⇒ $368 \times 10^5 - 1 = 4517 \times 8147$
→ This equation enables the computation of $\log(8147)$
- ⇒ $5524 \times 10^6 - 1 = 3 \times 7 \times 23 \times 1409 \times 8117$
→ This equation enables the computation of $\log(8117)$
- ⇒ $3225 \times 10^6 - 1 = 13 \times 113 \times 271 \times 8101$
→ This equation enables the computation of $\log(8101)$
- ⇒ $4821 \times 10^4 + 1 = 7 \times 23 \times 37 \times 8093$
→ This equation enables the computation of $\log(8093)$
- ⇒ $389 \times 10^5 + 1 = 3 \times 7 \times 229 \times 8089$
→ This equation enables the computation of $\log(8089)$
- ⇒ $6451 \times 10^4 - 1 = 3 \times 2659 \times 8087$
→ This equation enables the computation of $\log(8087)$

page 573:

- ⇒ $2637 \times 10^6 + 1 = 47 \times 53 \times 131 \times 8081$
→ This equation enables the computation of $\log(8081)$
- ⇒ $4218 \times 10^5 + 1 = 7 \times 7477 \times 8059$
→ This equation enables the computation of $\log(8059)$
- ⇒ $2188 \times 10^4 + 1 = 11 \times 13 \times 19 \times 8053$
→ This equation enables the computation of $\log(8053)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $5112 \times 10^4 + 1 = 6359 \times 8039$
→ This equation enables the computation of $\log(8039)$
- ⇒ $83 \times 10^6 + 1 = 3 \times 7 \times 17 \times 29 \times 8017$
→ This equation enables the computation of $\log(8017)$
- ⇒ $874 \times 10^4 + 1 = 1091 \times 8011$
→ This equation enables the computation of $\log(8011)$

page 574:

- ⇒ $7308 \times 10^4 - 1 = 41 \times 223 \times 7993$
→ This equation enables the computation of $\log(7993)$
- ⇒ $4003 \times 10^4 + 1 = 11 \times 457 \times 7963$
→ This equation enables the computation of $\log(7963)$
- ⇒ $4333 \times 10^4 - 1 = 3 \times 23 \times 79 \times 7949$
→ This equation enables the computation of $\log(7949)$
- ⇒ $3074 \times 10^4 + 1 = 3 \times 1291 \times 7937$
→ This equation enables the computation of $\log(7937)$
- ⇒ $6233 \times 10^4 + 1 = 3 \times 2621 \times 7927$
→ This equation enables the computation of $\log(7927)$

page 575:

- ⇒ $6519 \times 10^5 - 1 = 191 \times 431 \times 7919$
→ This equation enables the computation of $\log(7919)$
- ⇒ $7873 \times 10^4 - 1 = 3 \times 3319 \times 7907$
→ This equation enables the computation of $\log(7907)$
- ⇒ $6241 \times 10^4 - 1 = 3 \times 2633 \times 7901$
→ This equation enables the computation of $\log(7901)$
- ⇒ $4506 \times 10^4 + 1 = 7 \times 19 \times 43 \times 7879$
→ This equation enables the computation of $\log(7879)$
- ⇒ $4032 \times 10^5 - 1 = 17 \times 3011 \times 7877$
→ This equation enables the computation of $\log(7877)$
- ⇒ $3784 \times 10^5 - 1 = 3 \times 37 \times 433 \times 7873$
→ This equation enables the computation of $\log(7873)$

page 576:

- ⇒ $8494 \times 10^4 - 1 = 3 \times 59 \times 61 \times 7867$
→ This equation enables the computation of $\log(7867)$
- ⇒ $8259 \times 10^4 + 1 = 13 \times 809 \times 7853$
→ This equation enables the computation of $\log(7853)$
- ⇒ $1079 \times 10^5 + 1 = 3^2 \times 11 \times 139 \times 7841$
→ This equation enables the computation of $\log(7841)$
- ⇒ $4908 \times 10^4 + 1 = 6269 \times 7829$
→ This equation enables the computation of $\log(7829)$
- ⇒ $1653 \times 10^4 - 1 = 2113 \times 7823$
→ This equation enables the computation of $\log(7823)$

page 577:

- ⇒ $6134 \times 10^4 - 1 = 7 \times 19 \times 59 \times 7817$
→ This equation enables the computation of $\log(7817)$
- ⇒ $1252 \times 10^6 + 1 = 7 \times 59 \times 389 \times 7793$
→ This equation enables the computation of $\log(7793)$
- ⇒ $4604 \times 10^5 + 1 = 3 \times 17 \times 19 \times 61 \times 7789$
→ This equation enables the computation of $\log(7789)$
- ⇒ $6703 \times 10^4 + 1 = 53 \times 163 \times 7759$
→ This equation enables the computation of $\log(7759)$
- ⇒ $6284 \times 10^6 - 1 = 547 \times 1481 \times 7757$
→ This equation enables the computation of $\log(7757)$
- ⇒ $3056 \times 10^5 + 1 = 3 \times 7 \times 1877 \times 7753$
→ This equation enables the computation of $\log(7753)$

page 578:

- ⇒ $4965 \times 10^5 - 1 = 31 \times 2069 \times 7741$
→ This equation enables the computation of $\log(7741)$
- ⇒ $6442 \times 10^4 - 1 = 3 \times 7 \times 397 \times 7727$
→ This equation enables the computation of $\log(7727)$
- ⇒ $4026 \times 10^4 - 1 = 13 \times 401 \times 7723$
→ This equation enables the computation of $\log(7723)$
- ⇒ $5361 \times 10^4 - 1 = 6947 \times 7717$
→ This equation enables the computation of $\log(7717)$
- ⇒ $7522 \times 10^5 - 1 = 3 \times 29 \times 1123 \times 7699$
→ This equation enables the computation of $\log(7699)$

page 579:

- ⇒ $1312 \times 10^6 - 1 = 3 \times 101 \times 563 \times 7691$
→ This equation enables the computation of $\log(7691)$
- ⇒ $4902 \times 10^4 - 1 = 7 \times 911 \times 7687$
→ This equation enables the computation of $\log(7687)$
- ⇒ $1872 \times 10^5 - 1 = 7 \times 3499 \times 7643$
→ This equation enables the computation of $\log(7643)$
- ⇒ $6206 \times 10^5 - 1 = 137 \times 593 \times 7639$
→ This equation enables the computation of $\log(7639)$
- ⇒ $6766 \times 10^5 + 1 = 7 \times 11 \times 1153 \times 7621$
→ This equation enables the computation of $\log(7621)$
- ⇒ $203 \times 10^4 + 1 = 3 \times 89 \times 7603$
→ This equation enables the computation of $\log(7603)$

page 580:

- ⇒ $4029 \times 10^4 + 1 = 5309 \times 7589$
→ This equation enables the computation of $\log(7589)$
- ⇒ $231 \times 10^6 - 1 = 43 \times 709 \times 7577$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(7577)$
- ⇒ $3813 \times 10^4 - 1 = 5051 \times 7549$
- This equation enables the computation of $\log(7549)$
- ⇒ $452 \times 10^6 - 1 = 11 \times 5449 \times 7541$
- This equation enables the computation of $\log(7541)$
- ⇒ $4125 \times 10^4 + 1 = 13 \times 421 \times 7537$
- This equation enables the computation of $\log(7537)$

page 581:

- ⇒ $4483 \times 10^6 - 1 = 3^4 \times 7351 \times 7529$
- This equation enables the computation of $\log(7529)$
- ⇒ $6892 \times 10^6 - 1 = 3 \times 349 \times 857 \times 7681$
- This equation enables the computation of $\log(7681)$
- ⇒ $6935 \times 10^5 + 1 = 3 \times 43 \times 701 \times 7669$
- This equation enables the computation of $\log(7669)$
- ⇒ $2332 \times 10^5 - 1 = 3^3 \times 17 \times 67 \times 7583$
- This equation enables the computation of $\log(7583)$
- ⇒ $5576 \times 10^4 - 1 = 37 \times 199 \times 7573$
- This equation enables the computation of $\log(7573)$
- ⇒ $753 \times 10^5 - 1 = 23 \times 433 \times 7561$
- This equation enables the computation of $\log(7561)$

page 582:

- ⇒ $2809 \times 10^5 - 1 = 3^2 \times 4129 \times 7559$
- This equation enables the computation of $\log(7559)$
- ⇒ $5199 \times 10^6 + 1 = 13 \times 19 \times 2789 \times 7547$
- This equation enables the computation of $\log(7547)$
- ⇒ $3271 \times 10^6 - 1 = 3 \times 31 \times 4679 \times 7517$
- This equation enables the computation of $\log(7517)$
- ⇒ $5708 \times 10^6 - 1 = 13 \times 23 \times 2543 \times 7507$
- This equation enables the computation of $\log(7507)$
- ⇒ $943 \times 10^7 - 1 = 3 \times 7 \times 233 \times 257 \times 7499$
- This equation enables the computation of $\log(7499)$
- ⇒ $3684 \times 10^4 + 1 = 11 \times 449 \times 7459$
- This equation enables the computation of $\log(7459)$

page 583:

- ⇒ $4032 \times 10^4 - 1 = 5407 \times 7457$
- This equation enables the computation of $\log(7457)$
- ⇒ $7413 \times 10^4 - 1 = 9949 \times 7451$
- This equation enables the computation of $\log(7451)$
- ⇒ $764 \times 10^5 - 1 = 13^2 \times 61 \times 7411$
- This equation enables the computation of $\log(7411)$
- ⇒ $7203 \times 10^4 - 1 = 9743 \times 7393$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(7393)$
- ⇒ $3318 \times 10^5 + 1 = 13 \times 23 \times 151 \times 7349$
- This equation enables the computation of $\log(7349)$
- ⇒ $398 \times 10^5 - 1 = 61 \times 89 \times 7331$
- This equation enables the computation of $\log(7331)$

page 584:

- ⇒ $5184 \times 10^4 + 1 = 73 \times 97 \times 7321$
- This equation enables the computation of $\log(7321)$
- ⇒ $69 \times 10^6 + 1 = 7 \times 19 \times 71 \times 7307$
- This equation enables the computation of $\log(7307)$
- ⇒ $5373 \times 10^5 + 1 = 7 \times 67 \times 157 \times 7297$
- This equation enables the computation of $\log(7297)$
- ⇒ $4412 \times 10^4 - 1 = 7 \times 11 \times 79 \times 7253$
- This equation enables the computation of $\log(7253)$
- ⇒ $1264 \times 10^6 - 1 = 3 \times 47 \times 1237 \times 7247$
- This equation enables the computation of $\log(7247)$
- ⇒ $3699 \times 10^4 + 1 = 5107 \times 7243$
- This equation enables the computation of $\log(7243)$

page 585:

- ⇒ $4987 \times 10^5 - 1 = 3^2 \times 7^2 \times 151 \times 7489$
- This equation enables the computation of $\log(7489)$
- ⇒ $7055 \times 10^4 + 1 = 3^3 \times 349 \times 7487$
- This equation enables the computation of $\log(7487)$
- ⇒ $817 \times 10^5 + 1 = 67 \times 163 \times 7481$
- This equation enables the computation of $\log(7481)$
- ⇒ $2302 \times 10^4 + 1 = 19 \times 163 \times 7433$
- This equation enables the computation of $\log(7433)$
- ⇒ $484 \times 10^6 - 1 = 3 \times 7^2 \times 449 \times 7333$
- This equation enables the computation of $\log(7333)$

page 586:

- ⇒ $4085 \times 10^4 + 1 = 3^5 \times 23 \times 7309$
- This equation enables the computation of $\log(7309)$
- ⇒ $6935 \times 10^5 - 1 = 79 \times 1213 \times 7237$
- This equation enables the computation of $\log(7237)$
- ⇒ $2074 \times 10^4 + 1 = 19 \times 151 \times 7229$
- This equation enables the computation of $\log(7229)$
- ⇒ $2614 \times 10^4 - 1 = 3 \times 17 \times 71 \times 7219$
- This equation enables the computation of $\log(7219)$
- ⇒ $4128 \times 10^4 - 1 = 59 \times 97 \times 7213$
- This equation enables the computation of $\log(7213)$
- ⇒ $4248 \times 10^4 + 1 = 43 \times 137 \times 7211$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(7211)$

page 587:

$$\Rightarrow 2162 \times 10^5 + 1 = 3 \times 43 \times 233 \times 7193$$

→ This equation enables the computation of $\log(7193)$

$$\Rightarrow 4099 \times 10^5 + 1 = 7 \times 41 \times 199 \times 7177$$

→ This equation enables the computation of $\log(7177)$

$$\Rightarrow 7402 \times 10^4 + 1 = 11 \times 941 \times 7151$$

→ This equation enables the computation of $\log(7151)$

$$\Rightarrow 1999 \times 10^6 - 1 = 3^3 \times 37 \times 281 \times 7121$$

→ This equation enables the computation of $\log(7121)$

$$\Rightarrow 6394 \times 10^4 + 1 = 8969 \times 7129$$

→ This equation enables the computation of $\log(7129)$

$$\Rightarrow 4944 \times 10^4 - 1 = 7 \times 991 \times 7127$$

→ This equation enables the computation of $\log(7127)$

page 588:

$$\Rightarrow 6959 \times 10^4 + 1 = 3 \times 13 \times 251 \times 7109$$

→ This equation enables the computation of $\log(7109)$

$$\Rightarrow 1859 \times 10^4 - 1 = 19 \times 139 \times 7039$$

→ This equation enables the computation of $\log(7039)$

$$\Rightarrow 3214 \times 10^4 + 1 = 19 \times 241 \times 7019$$

→ This equation enables the computation of $\log(7019)$

$$\Rightarrow 5702 \times 10^6 - 1 = 233 \times 3457 \times 7079$$

→ This equation enables the computation of $\log(7079)$

$$\Rightarrow 2413 \times 10^5 + 1 = 31 \times 1103 \times 7057$$

→ This equation enables the computation of $\log(7057)$

$$\Rightarrow 1063 \times 10^5 - 1 = 3^3 \times 13 \times 43 \times 7043$$

→ This equation enables the computation of $\log(7043)$

page 589:

$$\Rightarrow 6994 \times 10^3 - 1 = 3^3 \times 37 \times 7001$$

→ This equation enables the computation of $\log(7001)$

$$\Rightarrow 6274 \times 10^5 - 1 = 3^7 \times 41 \times 6997$$

→ This equation enables the computation of $\log(6997)$

$$\Rightarrow 2509 \times 10^5 - 1 = 3 \times 7 \times 1709 \times 6991$$

→ This equation enables the computation of $\log(6991)$

$$\Rightarrow 3167 \times 10^5 - 1 = 7 \times 11 \times 19 \times 31 \times 6983$$

→ This equation enables the computation of $\log(6983)$

$$\Rightarrow 7614 \times 10^4 + 1 = 7 \times 1559 \times 6977$$

→ This equation enables the computation of $\log(6977)$

page 590:

$$\Rightarrow 762 \times 10^5 + 1 = 17 \times 643 \times 6971$$

→ This equation enables the computation of $\log(6971)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $4689 \times 10^5 + 1 = 17 \times 37 \times 107 \times 6967$
→ This equation enables the computation of $\log(6967)$
- ⇒ $6742 \times 10^4 - 1 = 3^3 \times 19^2 \times 6917$
→ This equation enables the computation of $\log(6917)$
- ⇒ $1582 \times 10^6 + 1 = 227 \times 1009 \times 6907$
→ This equation enables the computation of $\log(6907)$
- ⇒ $2138 \times 10^4 + 1 = 3 \times 1033 \times 6899$
→ This equation enables the computation of $\log(6899)$
- ⇒ $3755 \times 10^6 + 1 = 3 \times 17 \times 19 \times 563 \times 6883$
→ This equation enables the computation of $\log(6883)$

page 591:

- ⇒ $3933 \times 10^6 - 1 = 197 \times 2909 \times 6863$
→ This equation enables the computation of $\log(6863)$
- ⇒ $2738 \times 10^4 + 1 = 3 \times 11^3 \times 6857$
→ This equation enables the computation of $\log(6857)$
- ⇒ $1043 \times 10^6 - 1 = 163 \times 937 \times 6829$
→ This equation enables the computation of $\log(6829)$
- ⇒ $3644 \times 10^6 + 1 = 3^3 \times 53 \times 373 \times 6827$
→ This equation enables the computation of $\log(6827)$
- ⇒ $1577 \times 10^5 - 1 = 29 \times 797 \times 6823$
→ This equation enables the computation of $\log(6823)$
- ⇒ $1709 \times 10^6 - 1 = 7^2 \times 53 \times 103 \times 6389$
→ This equation enables the computation of $\log(6389)$

page 592:

- ⇒ $495 \times 10^6 + 1 = 71 \times 1061 \times 6571$
→ This equation enables the computation of $\log(6571)$
- ⇒ $4074 \times 10^4 + 1 = 6217 \times 6553$
→ This equation enables the computation of $\log(6553)$
- ⇒ $2248 \times 10^5 - 1 = 3 \times 23 \times 499 \times 6529$
→ This equation enables the computation of $\log(6529)$
- ⇒ $5414 \times 10^5 - 1 = 7 \times 67 \times 179 \times 6449$
→ This equation enables the computation of $\log(6449)$
- ⇒ $1738 \times 10^5 - 1 = 3^4 \times 337 \times 6367$
→ This equation enables the computation of $\log(6367)$
- ⇒ $5805 \times 10^4 - 1 = 7 \times 23 \times 53 \times 6803$
→ This equation enables the computation of $\log(6803)$

page 593:

- ⇒ $1373 \times 10^5 + 1 = 3 \times 7121 \times 6427$
→ This equation enables the computation of $\log(6427)$
- ⇒ $1903 \times 10^5 - 1 = 3 \times 23 \times 421 \times 6551$
→ This equation enables the computation of $\log(6551)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $3835 \times 10^4 + 1 = 5881 \times 6521$
→ This equation enables the computation of $\log(6521)$
- ⇒ $5494 \times 10^4 + 1 = 19 \times 431 \times 6709$
→ This equation enables the computation of $\log(6709)$
- ⇒ $6646 \times 10^4 + 1 = 31 \times 317 \times 6763$
→ This equation enables the computation of $\log(6763)$

page 594:

- ⇒ $206 \times 10^6 - 1 = 17 \times 1787 \times 6781$
→ This equation enables the computation of $\log(6781)$
- ⇒ $656 \times 10^5 + 1 = 3^2 \times 29 \times 37 \times 6793$
→ This equation enables the computation of $\log(6793)$
- ⇒ $3505 \times 10^5 - 1 = 3 \times 17 \times 1033 \times 6653$
→ This equation enables the computation of $\log(6653)$
- ⇒ $5971 \times 10^4 - 1 = 3 \times 31 \times 97 \times 6619$
→ This equation enables the computation of $\log(6619)$
- ⇒ $3632 \times 10^4 + 1 = 3 \times 19 \times 97 \times 6569$
→ This equation enables the computation of $\log(6569)$
- ⇒ $4355 \times 10^5 - 1 = 11 \times 17 \times 349 \times 6673$
→ This equation enables the computation of $\log(6673)$

page 595:

- ⇒ $1246 \times 10^6 - 1 = 3 \times 23 \times 2711 \times 6661$
→ This equation enables the computation of $\log(6661)$
- ⇒ $3693 \times 10^4 + 1 = 17 \times 331 \times 6563$
→ This equation enables the computation of $\log(6563)$
- ⇒ $4077 \times 10^5 + 1 = 17 \times 23 \times 163 \times 6397$
→ This equation enables the computation of $\log(6397)$
- ⇒ $7726 \times 10^4 + 1 = 7 \times 13 \times 131 \times 6481$
→ This equation enables the computation of $\log(6481)$
- ⇒ $5311 \times 10^6 - 1 = 3^2 \times 29 \times 3203 \times 6353$
→ This equation enables the computation of $\log(6353)$

page 596:

- ⇒ $5501 \times 10^4 - 1 = 11 \times 751 \times 6659$
→ This equation enables the computation of $\log(6659)$
- ⇒ $786 \times 10^6 - 1 = 19 \times 23 \times 271 \times 6637$
→ This equation enables the computation of $\log(6637)$
- ⇒ $7555 \times 10^4 - 1 = 3 \times 7 \times 547 \times 6577$
→ This equation enables the computation of $\log(6577)$
- ⇒ $7401 \times 10^4 - 1 = 7 \times 1583 \times 6679$
→ This equation enables the computation of $\log(6679)$
- ⇒ $4606 \times 10^4 + 1 = 13 \times 557 \times 6361$
→ This equation enables the computation of $\log(6361)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$$\Rightarrow 6188 \times 10^6 + 1 = 3 \times 53 \times 5741 \times 6779$$

→ This equation enables the computation of $\log(6779)$

page 597:

$$\Rightarrow 1701 \times 10^5 - 1 = 139 \times 181 \times 6761$$

→ This equation enables the computation of $\log(6761)$

$$\Rightarrow 4622 \times 10^4 + 1 = 3 \times 2293 \times 6719$$

→ This equation enables the computation of $\log(6719)$

$$\Rightarrow 6416 \times 10^4 - 1 = 43 \times 223 \times 6691$$

→ This equation enables the computation of $\log(6691)$

$$\Rightarrow 1407 \times 10^5 - 1 = 11 \times 43 \times 47 \times 6329$$

→ This equation enables the computation of $\log(6329)$

$$\Rightarrow 5446 \times 10^4 - 1 = 3^3 \times 11 \times 29 \times 6323$$

→ This equation enables the computation of $\log(6323)$

page 598:

$$\Rightarrow 4386 \times 10^6 - 1 = 199 \times 3499 \times 6299$$

→ This equation enables the computation of $\log(6299)$

$$\Rightarrow 9919 \times 10^4 - 1 = 3^2 \times 1753 \times 6287$$

→ This equation enables the computation of $\log(6287)$

$$\Rightarrow 5071 \times 10^5 - 1 = 3 \times 7 \times 3847 \times 6277$$

→ This equation enables the computation of $\log(6277)$

$$\Rightarrow 2863 \times 10^4 + 1 = 4583 \times 6247$$

→ This equation enables the computation of $\log(6247)$

$$\Rightarrow 5859 \times 10^5 + 1 = 53 \times 1777 \times 6221$$

→ This equation enables the computation of $\log(6221)$

$$\Rightarrow 4644 \times 10^5 + 1 = 13^2 \times 443 \times 6203$$

→ This equation enables the computation of $\log(6203)$

page 599:

$$\Rightarrow 2864 \times 10^5 - 1 = 47 \times 983 \times 6199$$

→ This equation enables the computation of $\log(6199)$

$$\Rightarrow 5843 \times 10^4 + 1 = 3 \times 7^2 \times 59 \times 6737$$

→ This equation enables the computation of $\log(6737)$

$$\Rightarrow 95 \times 10^5 + 1 = 3 \times 7 \times 73 \times 6197$$

→ This equation enables the computation of $\log(6197)$

$$\Rightarrow 5619 \times 10^5 + 1 = 13 \times 7027 \times 6151$$

→ This equation enables the computation of $\log(6151)$

$$\Rightarrow 1993 \times 10^6 - 1 = 3 \times 59 \times 1787 \times 6301$$

→ This equation enables the computation of $\log(6301)$

$$\Rightarrow 2277 \times 10^4 + 1 = 3631 \times 6271$$

→ This equation enables the computation of $\log(6271)$

page 600:

$$\Rightarrow 4274 \times 10^5 + 1 = 3^2 \times 7^2 \times 157 \times 6173$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(6173)$
- ⇒ $4914 \times 10^5 + 1 = 43 \times 1867 \times 6121$
- This equation enables the computation of $\log(6121)$
- ⇒ $845 \times 10^5 - 1 = 23 \times 601 \times 6113$
- This equation enables the computation of $\log(6113)$
- ⇒ $5863 \times 10^5 - 1 = 3 \times 103 \times 311 \times 6101$
- This equation enables the computation of $\log(6101)$
- ⇒ $5533 \times 10^4 + 1 = 9007 \times 6143$
- This equation enables the computation of $\log(6143)$
- ⇒ $3191 \times 10^4 - 1 = 11^2 \times 43 \times 6133$
- This equation enables the computation of $\log(6133)$

page 601:

- ⇒ $2966 \times 10^6 + 1 = 3 \times 47^2 \times 73 \times 6131$
- This equation enables the computation of $\log(6131)$
- ⇒ $2253 \times 10^5 - 1 = 47 \times 787 \times 6091$
- This equation enables the computation of $\log(6091)$
- ⇒ $4146 \times 10^4 + 1 = 11 \times 619 \times 6089$
- This equation enables the computation of $\log(6089)$
- ⇒ $2702 \times 10^6 - 1 = 37 \times 41 \times 293 \times 6079$
- This equation enables the computation of $\log(6079)$
- ⇒ $3727 \times 10^4 + 1 = 17 \times 19^2 \times 6073$
- This equation enables the computation of $\log(6073)$
- ⇒ $203 \times 10^7 - 1 = 313 \times 1069 \times 6067$
- This equation enables the computation of $\log(6067)$

page 602:

- ⇒ $6487 \times 10^4 + 1 = 7 \times 1531 \times 6053$
- This equation enables the computation of $\log(6053)$
- ⇒ $9725 \times 10^4 - 1 = 7 \times 11^2 \times 19 \times 6043$
- This equation enables the computation of $\log(6043)$
- ⇒ $5417 \times 10^4 + 1 = 3^2 \times 997 \times 6037$
- This equation enables the computation of $\log(6037)$
- ⇒ $1388 \times 10^5 + 1 = 3 \times 43 \times 179 \times 6011$
- This equation enables the computation of $\log(6011)$
- ⇒ $7895 \times 10^4 + 1 = 3 \times 13 \times 337 \times 6007$
- This equation enables the computation of $\log(6007)$

page 603:

- ⇒ $5725 \times 10^4 + 1 = 59 \times 163 \times 5953$
- This equation enables the computation of $\log(5953)$
- ⇒ $6162 \times 10^5 + 1 = 19 \times 5417 \times 5987$
- This equation enables the computation of $\log(5987)$
- ⇒ $3836 \times 10^4 + 1 = 3 \times 2153 \times 5939$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(5939)$
- ⇒ $2616 \times 10^5 - 1 = 19 \times 23 \times 101 \times 5927$
- This equation enables the computation of $\log(5927)$
- ⇒ $5323 \times 10^4 + 1 = 11 \times 19 \times 43 \times 5923$
- This equation enables the computation of $\log(5923)$
- ⇒ $4978 \times 10^4 - 1 = 3^2 \times 937 \times 5903$
- This equation enables the computation of $\log(5903)$

page 604:

- ⇒ $2463 \times 10^5 - 1 = 11 \times 3797 \times 5897$
- This equation enables the computation of $\log(5897)$
- ⇒ $1596 \times 10^5 + 1 = 11 \times 2473 \times 5867$
- This equation enables the computation of $\log(5867)$
- ⇒ $1681 \times 10^6 - 1 = 3 \times 7 \times 79 \times 173 \times 5857$
- This equation enables the computation of $\log(5857)$
- ⇒ $3889 \times 10^4 + 1 = 61 \times 109 \times 5849$
- This equation enables the computation of $\log(5849)$
- ⇒ $4095 \times 10^6 + 1 = 17 \times 67 \times 617 \times 5827$
- This equation enables the computation of $\log(5827)$
- ⇒ $2978 \times 10^4 - 1 = 47 \times 109 \times 5813$
- This equation enables the computation of $\log(5813)$

page 605:

- ⇒ $3817 \times 10^5 - 1 = 3^3 \times 2437 \times 5801$
- This equation enables the computation of $\log(5801)$
- ⇒ $286 \times 10^7 - 1 = 3 \times 353 \times 467 \times 5783$
- This equation enables the computation of $\log(5783)$
- ⇒ $3572 \times 10^4 - 1 = 7 \times 883 \times 5779$
- This equation enables the computation of $\log(5779)$
- ⇒ $8 \times 10^6 - 1 = 7 \times 199 \times 5743$
- This equation enables the computation of $\log(5743)$
- ⇒ $2735 \times 10^5 + 1 = 3^2 \times 5297 \times 5737$
- This equation enables the computation of $\log(5737)$

page 606:

- ⇒ $337 \times 10^6 - 1 = 3 \times 7^2 \times 401 \times 5717$
- This equation enables the computation of $\log(5717)$
- ⇒ $586 \times 10^6 - 1 = 3^2 \times 13 \times 877 \times 5711$
- This equation enables the computation of $\log(5711)$
- ⇒ $1913 \times 10^5 + 1 = 3 \times 79 \times 139 \times 5807$
- This equation enables the computation of $\log(5807)$
- ⇒ $8153 \times 10^4 + 1 = 3^2 \times 7 \times 227 \times 5701$
- This equation enables the computation of $\log(5701)$
- ⇒ $3049 \times 10^5 + 1 = 7^2 \times 1093 \times 5693$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(5693)$
- ⇒ $5644 \times 10^5 + 1 = 11 \times 29 \times 311 \times 5689$
- This equation enables the computation of $\log(5689)$

page 607:

- ⇒ $1563 \times 10^5 - 1 = 79 \times 349 \times 5669$
- This equation enables the computation of $\log(5669)$
- ⇒ $7759 \times 10^4 - 1 = 3^2 \times 37 \times 41 \times 5683$
- This equation enables the computation of $\log(5683)$
- ⇒ $5499 \times 10^5 - 1 = 11 \times 8837 \times 5657$
- This equation enables the computation of $\log(5657)$
- ⇒ $2053 \times 10^5 + 1 = 23 \times 1579 \times 5653$
- This equation enables the computation of $\log(5653)$
- ⇒ $4605 \times 10^4 - 1 = 29 \times 281 \times 5651$
- This equation enables the computation of $\log(5651)$
- ⇒ $2078 \times 10^6 + 1 = 3^4 \times 7 \times 11 \times 59 \times 5647$
- This equation enables the computation of $\log(5647)$

page 608:

- ⇒ $5447 \times 10^4 + 1 = 3 \times 3229 \times 5623$
- This equation enables the computation of $\log(5623)$
- ⇒ $3636 \times 10^4 + 1 = 6529 \times 5569$
- This equation enables the computation of $\log(5569)$
- ⇒ $9832 \times 10^4 + 1 = 13 \times 1361 \times 5557$
- This equation enables the computation of $\log(5557)$
- ⇒ $6432 \times 10^4 - 1 = 29 \times 401 \times 5531$
- This equation enables the computation of $\log(5531)$
- ⇒ $914 \times 10^5 - 1 = 23 \times 719 \times 5527$
- This equation enables the computation of $\log(5527)$

page 609:

- ⇒ $932 \times 10^5 + 1 = 3 \times 17 \times 331 \times 5521$
- This equation enables the computation of $\log(5521)$
- ⇒ $7943 \times 10^5 - 1 = 43 \times 3347 \times 5519$
- This equation enables the computation of $\log(5519)$
- ⇒ $3434 \times 10^5 - 1 = 127 \times 491 \times 5507$
- This equation enables the computation of $\log(5507)$
- ⇒ $4008 \times 10^5 - 1 = 173 \times 421 \times 5503$
- This equation enables the computation of $\log(5503)$
- ⇒ $6499 \times 10^4 - 1 = 3^3 \times 439 \times 5483$
- This equation enables the computation of $\log(5483)$
- ⇒ $7072 \times 10^5 - 1 = 3 \times 11 \times 3833 \times 5591$
- This equation enables the computation of $\log(5591)$

page 610:

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $6801 \times 10^4 + 1 = 31 \times 401 \times 5471$
→ This equation enables the computation of $\log(5471)$
- ⇒ $7243 \times 10^4 + 1 = 7 \times 1901 \times 5443$
→ This equation enables the computation of $\log(5443)$
- ⇒ $3065 \times 10^5 + 1 = 3 \times 19 \times 23 \times 43 \times 5437$
→ This equation enables the computation of $\log(5437)$
- ⇒ $6773 \times 10^4 + 1 = 3 \times 4157 \times 5431$
→ This equation enables the computation of $\log(5431)$
- ⇒ $3803 \times 10^5 + 1 = 3 \times 149 \times 157 \times 5419$
→ This equation enables the computation of $\log(5419)$
- ⇒ $1161 \times 10^4 + 1 = 13 \times 163 \times 5479$
→ This equation enables the computation of $\log(5479)$

page 611:

- ⇒ $1868 \times 10^5 + 1 = 3 \times 19 \times 607 \times 5399$
→ This equation enables the computation of $\log(5399)$
- ⇒ $5487 \times 10^5 - 1 = 71 \times 1433 \times 5393$
→ This equation enables the computation of $\log(5393)$
- ⇒ $4327 \times 10^5 + 1 = 47 \times 1709 \times 5387$
→ This equation enables the computation of $\log(5387)$
- ⇒ $5771 \times 10^5 - 1 = 7^2 \times 31 \times 71 \times 5351$
→ This equation enables the computation of $\log(5351)$
- ⇒ $9282 \times 10^5 - 1 = 101 \times 1733 \times 5303$
→ This equation enables the computation of $\log(5303)$

page 612:

- ⇒ $4528 \times 10^5 + 1 = 19 \times 4457 \times 5347$
→ This equation enables the computation of $\log(5347)$
- ⇒ $8032 \times 10^5 + 1 = 53 \times 2861 \times 5297$
→ This equation enables the computation of $\log(5297)$
- ⇒ $1033 \times 10^6 - 1 = 3 \times 19 \times 3433 \times 5279$
→ This equation enables the computation of $\log(5279)$
- ⇒ $2438 \times 10^5 + 1 = 3^2 \times 19 \times 271 \times 5261$
→ This equation enables the computation of $\log(5261)$
- ⇒ $1981 \times 10^5 - 1 = 3^4 \times 467 \times 5237$
→ This equation enables the computation of $\log(5237)$
- ⇒ $3964 \times 10^5 - 1 = 3 \times 17 \times 1487 \times 5227$
→ This equation enables the computation of $\log(5227)$

page 613:

- ⇒ $4151 \times 10^5 + 1 = 3 \times 101 \times 263 \times 5209$
→ This equation enables the computation of $\log(5209)$
- ⇒ $5038 \times 10^4 + 1 = 7 \times 19 \times 73 \times 5189$
→ This equation enables the computation of $\log(5189)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- ⇒ $4962 \times 10^4 - 1 = 11 \times 13 \times 67 \times 5179$
→ This equation enables the computation of $\log(5179)$
- ⇒ $5504 \times 10^5 - 1 = 19 \times 5659 \times 5119$
→ This equation enables the computation of $\log(5119)$
- ⇒ $7597 \times 10^4 + 1 = 47 \times 317 \times 5099$
→ This equation enables the computation of $\log(5099)$

page 614:

- ⇒ $5584 \times 10^4 - 1 = 3 \times 3659 \times 5087$
→ This equation enables the computation of $\log(5087)$
- ⇒ $2575 \times 10^5 - 1 = 3^3 \times 1877 \times 5081$
→ This equation enables the computation of $\log(5081)$
- ⇒ $2944 \times 10^5 - 1 = 3^2 \times 17 \times 379 \times 5077$
→ This equation enables the computation of $\log(5077)$
- ⇒ $5362 \times 10^4 - 1 = 3 \times 3547 \times 5039$
→ This equation enables the computation of $\log(5039)$
- ⇒ $8727 \times 10^4 + 1 = 7 \times 13 \times 191 \times 5021$
→ This equation enables the computation of $\log(5021)$
- ⇒ $6957 \times 10^4 + 1 = 17 \times 19 \times 43 \times 5009$
→ This equation enables the computation of $\log(5009)$

page 615:

- ⇒ $25 \times 10^6 - 1 = 3 \times 1667 \times 4999$
→ This equation enables the computation of $\log(4999)$
- ⇒ $4886 \times 10^5 + 1 = 3^2 \times 83 \times 131 \times 4993$
→ This equation enables the computation of $\log(4993)$
- ⇒ $73 \times 10^6 - 1 = 3^2 \times 23 \times 71 \times 4967$
→ This equation enables the computation of $\log(4967)$
- ⇒ $631 \times 10^6 - 1 = 3^2 \times 7^2 \times 17^2 \times 4951$
→ This equation enables the computation of $\log(4951)$
- ⇒ $3859 \times 10^4 + 1 = 37 \times 211 \times 4943$
→ This equation enables the computation of $\log(4943)$

page 616:

- ⇒ $1438 \times 10^5 - 1 = 3 \times 7 \times 19 \times 73 \times 4937$
→ This equation enables the computation of $\log(4937)$
- ⇒ $3466 \times 10^4 - 1 = 3^2 \times 11 \times 71 \times 4931$
→ This equation enables the computation of $\log(4931)$
- ⇒ $2918 \times 10^5 - 1 = 137 \times 433 \times 4919$
→ This equation enables the computation of $\log(4919)$
- ⇒ $7849 \times 10^4 + 1 = 59 \times 271 \times 4909$
→ This equation enables the computation of $\log(4909)$
- ⇒ $1936 \times 10^6 - 1 = 3^2 \times 23 \times 1913 \times 4889$
→ This equation enables the computation of $\log(4889)$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

$\Rightarrow 2223 \times 10^6 + 1 = 101 \times 4513 \times 4877$
→ This equation enables the computation of $\log(4877)$

page 617:

$\Rightarrow 3905 \times 10^5 + 1 = 3^3 \times 3209 \times 4507$
→ This equation enables the computation of $\log(4507)$
 $\Rightarrow 3266 \times 10^5 - 1 = 11 \times 37 \times 179 \times 4483$
→ This equation enables the computation of $\log(4483)$
 $\Rightarrow 2541 \times 10^5 + 1 = 29 \times 41 \times 47 \times 4547$
→ This equation enables the computation of $\log(4547)$
 $\Rightarrow 1883 \times 10^6 + 1 = 3 \times 83 \times 1699 \times 4451$
→ This equation enables the computation of $\log(4451)$
 $\Rightarrow 2292 \times 10^4 + 1 = 13 \times 397 \times 4441$
→ This equation enables the computation of $\log(4441)$
 $\Rightarrow 11 \times 10^6 + 1 = 3 \times 829 \times 4423$
→ This equation enables the computation of $\log(4423)$

page 618:

$\Rightarrow 4335 \times 10^5 + 1 = 11 \times 31 \times 271 \times 4691$
→ This equation enables the computation of $\log(4691)$
 $\Rightarrow 7504 \times 10^5 + 1 = 13 \times 23 \times 541 \times 4639$
→ This equation enables the computation of $\log(4639)$
 $\Rightarrow 3611 \times 10^6 + 1 = 3 \times 7 \times 31 \times 1187 \times 4673$
→ This equation enables the computation of $\log(4673)$
 $\Rightarrow 1365 \times 10^5 - 1 = 73 \times 401 \times 4663$
→ This equation enables the computation of $\log(4663)$
 $\Rightarrow 7309 \times 10^5 - 1 = 3^2 \times 19 \times 919 \times 4651$
→ This equation enables the computation of $\log(4651)$

page 619:

$\Rightarrow 8298 \times 10^4 + 1 = 13 \times 1373 \times 4649$
→ This equation enables the computation of $\log(4649)$
 $\Rightarrow 7069 \times 10^6 + 1 = 7 \times 263 \times 827 \times 4643$
→ This equation enables the computation of $\log(4643)$
 $\Rightarrow 9076 \times 10^4 + 1 = 23^2 \times 37 \times 4637$
→ This equation enables the computation of $\log(4637)$
 $\Rightarrow 7239 \times 10^5 + 1 = 11 \times 17 \times 29^2 \times 4603$
→ This equation enables the computation of $\log(4603)$
 $\Rightarrow 8633 \times 10^4 + 1 = 3 \times 6301 \times 4567$
→ This equation enables the computation of $\log(4567)$
 $\Rightarrow 8165 \times 10^4 + 1 = 3 \times 31 \times 193 \times 4549$
→ This equation enables the computation of $\log(4549)$

page 620:

$\Rightarrow 3818 \times 10^5 - 1 = 7 \times 31 \times 389 \times 4523$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(4523)$
- ⇒ $4651 \times 10^5 - 1 = 3 \times 7 \times 13^2 \times 29 \times 4519$
- This equation enables the computation of $\log(4519)$
- ⇒ $7105 \times 10^5 + 1 = 61 \times 2411 \times 4831$
- This equation enables the computation of $\log(4831)$
- ⇒ $6703 \times 10^5 + 1 = 7 \times 103 \times 193 \times 4817$
- This equation enables the computation of $\log(4817)$
- ⇒ $6491 \times 10^5 + 1 = 3 \times 11 \times 17 \times 241 \times 4801$
- This equation enables the computation of $\log(4801)$

page 621:

- ⇒ $4688 \times 10^5 - 1 = 53 \times 1847 \times 4789$
- This equation enables the computation of $\log(4789)$
- ⇒ $9465 \times 10^5 + 1 = 149 \times 1327 \times 4787$
- This equation enables the computation of $\log(4787)$
- ⇒ $4837 \times 10^5 + 1 = 37 \times 41 \times 67 \times 4759$
- This equation enables the computation of $\log(4759)$
- ⇒ $8195 \times 10^4 - 1 = 47 \times 367 \times 4751$
- This equation enables the computation of $\log(4751)$
- ⇒ $7696 \times 10^5 - 1 = 3^2 \times 7 \times 29 \times 89 \times 4733$
- This equation enables the computation of $\log(4733)$
- ⇒ $8602 \times 10^4 - 1 = 3 \times 13 \times 467 \times 4723$
- This equation enables the computation of $\log(4723)$

page 622:

- ⇒ $2765 \times 10^6 + 1 = 3 \times 197 \times 991 \times 4721$
- This equation enables the computation of $\log(4721)$
- ⇒ $7448 \times 10^5 + 1 = 3 \times 11 \times 4799 \times 4703$
- This equation enables the computation of $\log(4703)$
- ⇒ $7938 \times 10^5 + 1 = 283 \times 607 \times 4621$
- This equation enables the computation of $\log(4621)$
- ⇒ $3698 \times 10^6 - 1 = 607 \times 1327 \times 4591$
- This equation enables the computation of $\log(4591)$
- ⇒ $727 \times 10^5 + 1 = 11 \times 1499 \times 4409$
- This equation enables the computation of $\log(4409)$
- ⇒ $6959 \times 10^5 - 1 = 101 \times 1567 \times 4397$
- This equation enables the computation of $\log(4397)$

page 623:

- ⇒ $3972 \times 10^5 + 1 = 11 \times 8419 \times 4289$
- This equation enables the computation of $\log(4289)$
- ⇒ $7236 \times 10^5 + 1 = 43 \times 3929 \times 4283$
- This equation enables the computation of $\log(4283)$
- ⇒ $9429 \times 10^4 + 1 = 13^2 \times 131 \times 4259$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

- This equation enables the computation of $\log(4259)$
- ⇒ $7568 \times 10^5 + 1 = 3^2 \times 19 \times 1049 \times 4219$
- This equation enables the computation of $\log(4219)$
- ⇒ $7955 \times 10^4 + 1 = 3^2 \times 2099 \times 4211$
- This equation enables the computation of $\log(4211)$

page 624:

- ⇒ $5731 \times 10^6 - 1 = 3 \times 17 \times 23 \times 1163 \times 4201$
- This equation enables the computation of $\log(4201)$
- ⇒ $4229 \times 10^4 - 1 = 17 \times 599 \times 4153$
- This equation enables the computation of $\log(4153)$
- ⇒ $6115 \times 10^5 - 1 = 3 \times 11^3 \times 37 \times 4139$
- This equation enables the computation of $\log(4139)$
- ⇒ $9494 \times 10^5 + 1 = 3^3 \times 11^2 \times 71 \times 4093$
- This equation enables the computation of $\log(4093)$
- ⇒ $7241 \times 10^5 + 1 = 3 \times 47 \times 1259 \times 4079$
- This equation enables the computation of $\log(4079)$
- ⇒ $7529 \times 10^5 + 1 = 3 \times 7 \times 29 \times 307 \times 4027$
- This equation enables the computation of $\log(4027)$

page 625:

- ⇒ $9011 \times 10^4 - 1 = 7 \times 3203 \times 4019$
- This equation enables the computation of $\log(4019)$
- ⇒ $1671 \times 10^7 - 1 = 7 \times 11 \times 149 \times 359 \times 4057$
- This equation enables the computation of $\log(4057)$
- ⇒ $3729 \times 10^5 - 1 = 43 \times 2161 \times 4013$
- This equation enables the computation of $\log(4013)$
- ⇒ $4017 \times 10^6 - 1 = 61 \times 109 \times 151 \times 4001$
- This equation enables the computation of $\log(4001)$
- ⇒ $2886 \times 10^5 - 1 = 53 \times 1381 \times 3943$
- This equation enables the computation of $\log(3943)$
- ⇒ $7625 \times 10^5 + 1 = 3 \times 19 \times 41 \times 83 \times 3931$
- This equation enables the computation of $\log(3931)$

page 626:

- ⇒ $6395 \times 10^5 - 1 = 17 \times 43 \times 223 \times 3923$
- This equation enables the computation of $\log(3923)$
- ⇒ $1086 \times 10^6 + 1 = 17 \times 47 \times 347 \times 3917$
- This equation enables the computation of $\log(3917)$
- ⇒ $875 \times 10^6 - 1 = 281 \times 797 \times 3907$
- This equation enables the computation of $\log(3907)$
- ⇒ $9553 \times 10^6 - 1 = 3 \times 53 \times 113 \times 137 \times 3881$
- This equation enables the computation of $\log(3881)$
- ⇒ $9108 \times 10^4 + 1 = 67 \times 353 \times 3851$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(3851)$

page 627:

$$\Rightarrow 5978 \times 10^4 + 1 = 3 \times 5273 \times 3779$$

→ This equation enables the computation of $\log(3779)$

$$\Rightarrow 7354 \times 10^5 + 1 = 7 \times 109 \times 269 \times 3583$$

→ This equation enables the computation of $\log(3583)$

$$\Rightarrow 4339 \times 10^5 + 1 = 29 \times 4591 \times 3259$$

→ This equation enables the computation of $\log(3259)$

$$\Rightarrow 7386 \times 10^6 - 1 = 7 \times 71 \times 3943 \times 3769$$

→ This equation enables the computation of $\log(3769)$

$$\Rightarrow 8354 \times 10^5 - 1 = 7 \times 19 \times 1699 \times 3697$$

→ This equation enables the computation of $\log(3697)$

$$\Rightarrow 9277 \times 10^6 + 1 = 941 \times 2671 \times 3691$$

→ This equation enables the computation of $\log(3691)$

page 628:

$$\Rightarrow 7037 \times 10^6 - 1 = 19 \times 151 \times 677 \times 3623$$

→ This equation enables the computation of $\log(3623)$

$$\Rightarrow 9365 \times 10^6 + 1 = 3 \times 7^3 \times 17 \times 149 \times 3593$$

→ This equation enables the computation of $\log(3593)$

$$\Rightarrow 7983 \times 10^6 - 1 = 13 \times 31 \times 5569 \times 3557$$

→ This equation enables the computation of $\log(3557)$

$$\Rightarrow 6638 \times 10^6 - 1 = 19 \times 41 \times 43 \times 53 \times 3739$$

→ This equation enables the computation of $\log(3739)$

$$\Rightarrow 4434 \times 10^6 - 1 = 11 \times 13 \times 19 \times 457 \times 3571$$

→ This equation enables the computation of $\log(3571)$

$$\Rightarrow 6217 \times 10^6 + 1 = 409 \times 4271 \times 3559$$

→ This equation enables the computation of $\log(3559)$

$$\Rightarrow 4393 \times 10^5 + 1 = 7 \times 37 \times 479 \times 3541$$

→ This equation enables the computation of $\log(3541)$

page 629:

$$\Rightarrow 9346 \times 10^6 + 1 = 13 \times 31 \times 6553 \times 3539$$

→ This equation enables the computation of $\log(3539)$

$$\Rightarrow 7064 \times 10^5 + 1 = 3^3 \times 43 \times 173 \times 3517$$

→ This equation enables the computation of $\log(3517)$

$$\Rightarrow 7031 \times 10^6 - 1 = 37 \times 71 \times 761 \times 3517$$

→ This equation enables the computation of $\log(3517)$

$$\Rightarrow 8344 \times 10^5 + 1 = 17 \times 73 \times 197 \times 3413$$

→ This equation enables the computation of $\log(3413)$

$$\Rightarrow 7501 \times 10^6 - 1 = 3 \times 821 \times 911 \times 3343$$

→ This equation enables the computation of $\log(3343)$

$$\Rightarrow 9855 \times 10^6 + 1 = 7^2 \times 11^2 \times 499 \times 3331$$

→ This equation enables the computation of $\log(3331)$

page 630:

$$\Rightarrow 8786 \times 10^6 - 1 = 7 \times 101 \times 3733 \times 3329$$

→ This equation enables the computation of $\log(3329)$

$$\Rightarrow 9517 \times 10^6 - 1 = 3 \times 13 \times 73 \times 1009 \times 3313$$

→ This equation enables the computation of $\log(3313)$

$$\Rightarrow 9464 \times 10^5 + 1 = 3 \times 227 \times 421 \times 3301$$

→ This equation enables the computation of $\log(3301)$

$$\Rightarrow 5747 \times 10^6 - 1 = 13 \times 131 \times 1049 \times 3217$$

→ This equation enables the computation of $\log(3217)$

$$\Rightarrow 5452 \times 10^6 + 1 = 7 \times 83 \times 3167 \times 2963$$

→ This equation enables the computation of $\log(2963)$

$$\Rightarrow 7171 \times 10^6 + 1 = 11 \times 113 \times 1951 \times 2957$$

→ This equation enables the computation of $\log(2957)$

page 631:

$$\Rightarrow 7271 \times 10^6 - 1 = 101 \times 103 \times 227 \times 3079$$

→ This equation enables the computation of $\log(3079)$

$$\Rightarrow 6724 \times 10^6 - 1 = 3^3 \times 43 \times 1907 \times 3037$$

→ This equation enables the computation of $\log(3037)$

$$\Rightarrow 5686 \times 10^6 - 1 = 3 \times 383 \times 1637 \times 3023$$

→ This equation enables the computation of $\log(3023)$

$$\Rightarrow 8347 \times 10^6 + 1 = 1319 \times 2143 \times 2953$$

→ This equation enables the computation of $\log(2953)$

$$\Rightarrow 6058 \times 10^6 - 1 = 3^2 \times 47 \times 5113 \times 2801$$

→ This equation enables the computation of $\log(2801)$

$$\Rightarrow 1331 \times 10^6 - 1 = 7 \times 157 \times 433 \times 2797$$

→ This equation enables the computation of $\log(2797)$

$$\Rightarrow 5594 \times 10^6 + 1 = 3 \times 73 \times 9319 \times 2741$$

→ This equation enables the computation of $\log(2741)$

page 632:

$$\Rightarrow 7909 \times 10^6 - 1 = 3 \times 41 \times 137 \times 173 \times 2713$$

→ This equation enables the computation of $\log(2713)$

$$\Rightarrow 7406 \times 10^6 + 1 = 3^2 \times 193 \times 1367 \times 3119$$

→ This equation enables the computation of $\log(3119)$

$$\Rightarrow 8033 \times 10^6 + 1 = 3 \times 13 \times 97 \times 683 \times 3109$$

→ This equation enables the computation of $\log(3109)$

$$\Rightarrow 8482 \times 10^6 + 1 = 1447 \times 1973 \times 2971$$

→ This equation enables the computation of $\log(2971)$

$$\Rightarrow 5535 \times 10^6 + 1 = 29 \times 83 \times 859 \times 2677$$

→ This equation enables the computation of $\log(2677)$

$$\Rightarrow 7892 \times 10^6 + 1 = 3^2 \times 379 \times 797 \times 2903$$

→ This equation enables the computation of $\log(2903)$

page 633:

$$\Rightarrow 3257 \times 10^6 - 1 = 11 \times 37 \times 2857 \times 2801$$

→ This equation enables the computation of $\log(2801)$

$$\Rightarrow 6531 \times 10^6 + 1 = 83 \times 103 \times 271 \times 2819$$

→ This equation enables the computation of $\log(2819)$

$$\Rightarrow 7802 \times 10^6 - 1 = 353 \times 8093 \times 2731$$

→ This equation enables the computation of $\log(2731)$

$$\Rightarrow 7796 \times 10^6 - 1 = 887 \times 3271 \times 2687$$

→ This equation enables the computation of $\log(2687)$

$$\Rightarrow 7573 \times 10^6 - 1 = 3 \times 29 \times 181^2 \times 2657$$

→ This equation enables the computation of $\log(2657)$

$$\Rightarrow 4051 \times 10^6 - 1 = 3^3 \times 79 \times 733 \times 2591$$

→ This equation enables the computation of $\log(2591)$

$$\Rightarrow 4783 \times 10^6 + 1 = 13 \times 233 \times 619 \times 2551$$

→ This equation enables the computation of $\log(2551)$

page 634:

$$\Rightarrow 9943 \times 10^5 + 1 = 19 \times 37 \times 571 \times 2477$$

→ This equation enables the computation of $\log(2477)$

$$\Rightarrow 8827 \times 10^5 + 1 = 43 \times 53 \times 157 \times 2467$$

→ This equation enables the computation of $\log(2467)$

$$\Rightarrow 3248 \times 10^6 + 1 = 3^2 \times 47 \times 3169 \times 2423$$

→ This equation enables the computation of $\log(2423)$

$$\Rightarrow 5944 \times 10^6 - 1 = 3 \times 7 \times 181 \times 647 \times 2417$$

→ This equation enables the computation of $\log(2417)$

$$\Rightarrow 6754 \times 10^6 - 1 = 3 \times 463 \times 2063 \times 2357$$

→ This equation enables the computation of $\log(2357)$

$$\Rightarrow 6836 \times 10^6 + 1 = 3 \times 367 \times 2689 \times 2309$$

→ This equation enables the computation of $\log(2309)$

page 635:

$$\Rightarrow 3173 \times 10^6 - 1 = 13 \times 59 \times 1801 \times 2297$$

→ This equation enables the computation of $\log(2297)$

$$\Rightarrow 2978 \times 10^6 + 1 = 3^2 \times 313 \times 479 \times 2207$$

→ This equation enables the computation of $\log(2207)$

$$\Rightarrow 6289 \times 10^6 + 1 = 29 \times 37 \times 2753 \times 2129$$

→ This equation enables the computation of $\log(2129)$

$$\Rightarrow 5353 \times 10^6 + 1 = 17 \times 337 \times 449 \times 2081$$

→ This equation enables the computation of $\log(2081)$

$$\Rightarrow 3539 \times 10^6 - 1 = 197 \times 9041 \times 1987$$

→ This equation enables the computation of $\log(1987)$

$$\Rightarrow 7222 \times 10^5 + 1 = 17 \times 71 \times 307 \times 1949$$

Sang's construction of the first logarithms (K1-K3) (reconstruction, D. Roegel, 2020)

→ This equation enables the computation of $\log(1949)$

page 636:

$$\Rightarrow 135 \times 10^5 + 1 = 53 \times 179 \times 1423$$

→ This equation enables the computation of $\log(1423)$

$$\Rightarrow 425 \times 10^7 + 1 = 3 \times 13^2 \times 89 \times 97 \times 971$$

→ This equation enables the computation of $\log(971)$

$$\Rightarrow 8129 \times 10^5 - 1 = 17 \times 103 \times 157 \times 2957$$

→ This equation enables the computation of $\log(2957)$

$$\Rightarrow 4892 \times 10^6 + 1 = 3 \times 7 \times 151 \times 1511 \times 1021$$

→ This equation enables the computation of $\log(1021)$

$$\Rightarrow 808 \times 10^6 + 1 = 29^2 \times 941 \times 1021$$

→ This equation enables the computation of $\log(1021)$

page 637:

$$\Rightarrow 5342 \times 10^6 + 1 = 3 \times 13 \times 149 \times 823 \times 1117$$

→ This equation enables the computation of $\log(1117)$

$$\Rightarrow 2639 \times 10^6 - 1 = 43 \times 211 \times 239 \times 1217$$

→ This equation enables the computation of $\log(1217)$

$$\Rightarrow 2229 \times 10^6 + 1 = 29 \times 137 \times 461 \times 1217$$

→ This equation enables the computation of $\log(1217)$