

Figures

The accumulator:

```

<----- accumulator (size = wq bits) ----->
[-----]-----]00000....
|   cq   | maxexp   sq + dq   minexp |
| sign bit (0 = positive, 1 = negative) | non-represented bits = 0

```

Example of first iteration and after a cancellation with shiftq = 26:

```

          [-----]-----]
          |   cq   | maxexp   sq + dq   minexp |
Before shift: 000000000000000000000000000001-----]
          <--- identical bits (0) --->
                          <----- 26 zeros ----->
After shift: 001-----000000000000000000000000000000
This iteration:          minexp |   | maxexp2
Next iteration:          | maxexp   minexp |

```

After the first sum_raw invocation, case $u > \text{minexp}$:

```

<----- accumulator ----->
[---- cancel ----]-----]
0000000000000000000000001xxxxxxxxxxxxxxxxxxxxxxxxrffffffffffff0000...
1111111111111111111110xxxxxxxxxxxxxxxxxxxxxxxxrffffffffffff0000...
          |   e           u   |   minexp |

```

x: bits of the uncorrected sq-bit significand (in two's complement),
after the first bit.
r: rounding bit (in two's complement).
f: represented bits that follow the rounding bit (in two's complement).