20220224 Shi Qin

0.5 × − 0.437 ≈

$1.00 \times 2^{-5} \cdot -1.11 \times 2^{8}$

2×2

1.00

× 1.11

100

100

100↓↓

11100 4

1.1100 → 1.11×2^{3}

round

sign (-)

$= -1.11 \times 2^{3}$

-5 +8 = 3

Check:

= 1110 = 8+4+2 = 14

Other

$-\frac{111}{2^5} = \frac{-7}{32} = -0.21$

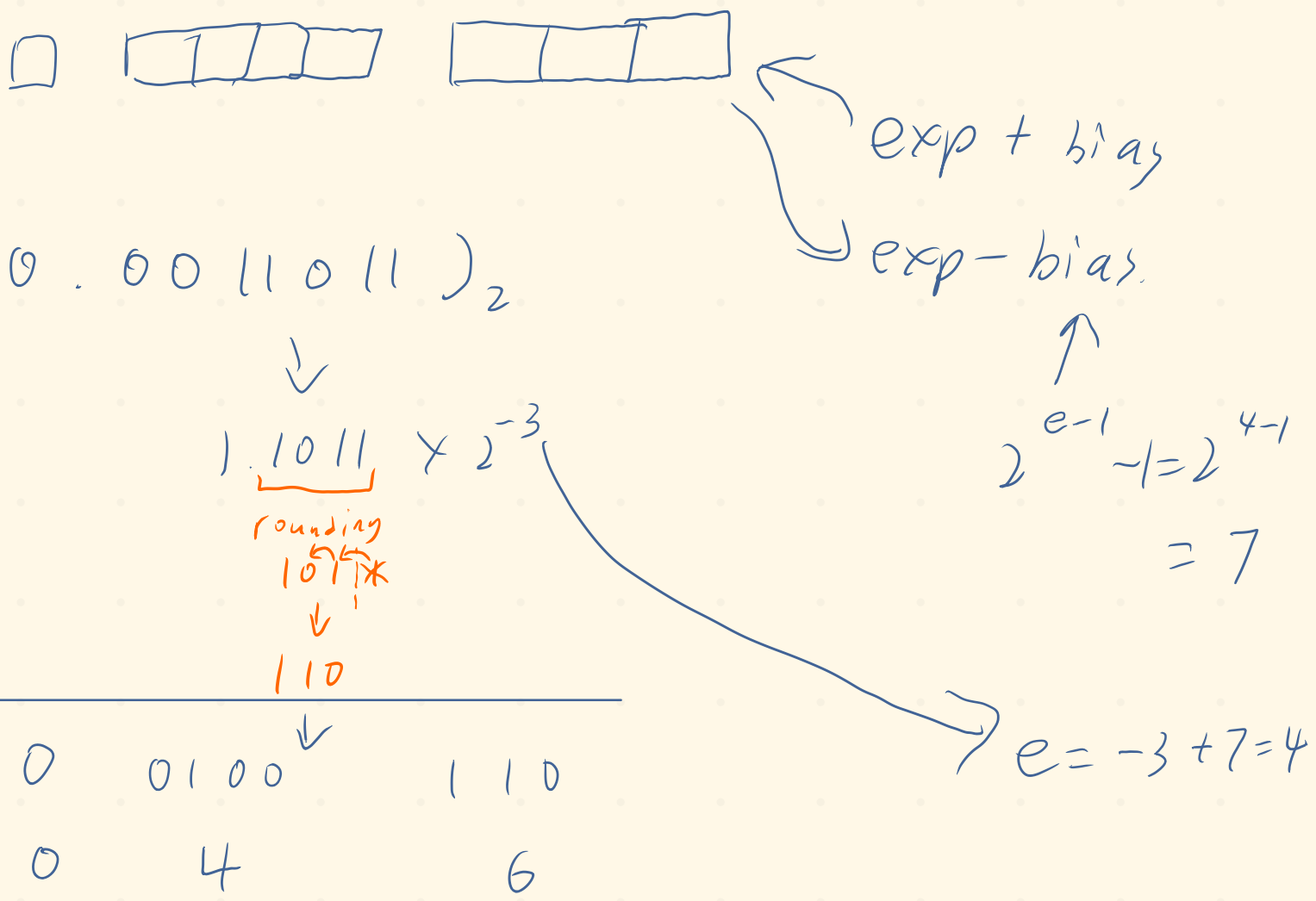
185 + 122

1 0111001 → −57

0 1111010 → 122

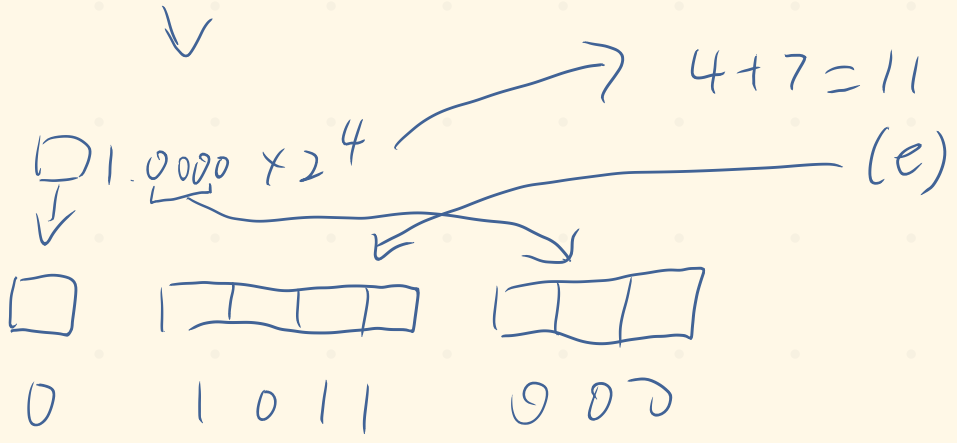
−57 + 122 = 65

8-bit IEEE 754



$16)_{10} \rightarrow$ IEEE 8 bit

10000



CPU Time = Instruction · CPI · Clock cycle time

$= 100000 \cdot 1.3 / 600 \cdot 10^6$ ns. ← 600MHz

$= x \cdot 2.5 / 750 \cdot 10^6$

65000