

Home Work #5

31.75₍₁₀₎

Convert to IEEE 754 single FP format

11111.11

"Positive Number"



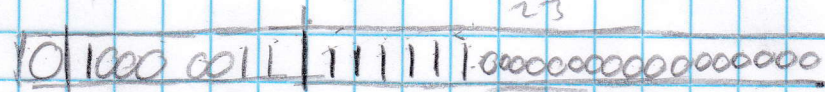
1.111111 x 2⁴

$$127 + 4 = 131$$

10000011

$$\begin{aligned} \text{BIAS} &= (2^{m-1} - 1) \\ 2^{8-1} &= 255 \\ 255 // 2 &= 127 \end{aligned}$$

IEEE



Sign Exponent

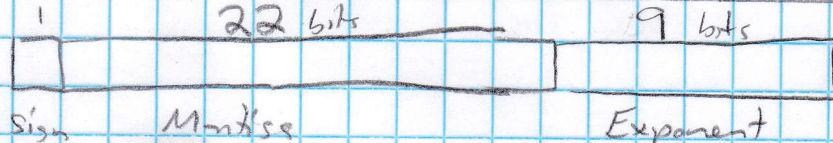
Mantissa

4 1 F E 0 0 0 0

IEEE 754

TNS

Tandem NonStop Series



Sign

Mantissa

Exponent

$$\begin{aligned} \text{BIAS} &= (2^{m-1} - 1) \\ \text{"Excess 256"} &= 2^{9-1} \\ &= 256 \end{aligned}$$

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"Positive Number"

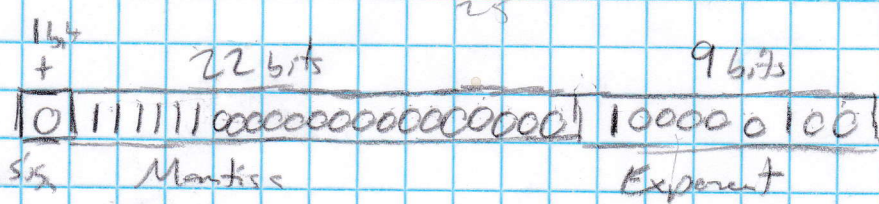


1.111111 x 2⁴

$$256 + 4 = 260$$

100000100

Exponent



Sign

Mantissa

Exponent

7 E 0 0 0 1 0 4

TNS single prec float point format