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Quiz

1) Convert decimal to binary

5.75

= 101.11

11	1
5	1
2	1
1	0
0	1

63/64

= 0.111111

31	1
15	1
7	1
3	1
1	1
0	1

9.8125

= 1001.1101

78	1
39	0
19	1
9	1
4	1
2	0
1	0
0	1

Convert the 34.890625 into IEEE 754

Single Precision

0	10000100	1.000101110100000000000000
Sign	Exponent	Mantissa

The Sign is stored in bit 32. The exponent can be computed from bits 24-31 by subtracting 127.

0 | 01111011 | 0000 - ... 23 bits.

$$= 0 \quad 2^{-4}$$

$$= 0.0625$$

4.) - largest denormalized number $0.111 \dots 111_2 \times 2^{-126}$

Smallest normalized number
 1.0×2^{1022}

Since the smallest exponent is -1022 , the smallest positive number