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Student ID: 404420005

Name: 陳語辰

Convert $(2.25)_{10}$ to the IEEE 754 single-precision floating-point format with one sign bit, eight-bit exponent, and 23-bit fraction.

$$\frac{9}{4} = 9 \times 2^{-2} \Rightarrow 1001 \times 2^{-2} = 1.001 \times 2^1 = (-1)^0 (1 + 0.001000\ldots) \times 2^{E-127}$$

$$\Rightarrow E = 128$$

0	1000 0000	0010 0000 0000 0000 0000 000
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11
10
9
8
7
6
5
4
3
2
1
0