

Floating Point: $4.421875 = \frac{283}{64}$

Sign: 0

$$4.421875 = 1.10546875 \times 2^2 \Rightarrow 1.01546875 \times 2^{129}$$

Exponent: $129_{10} = 1000\ 0001_b$

$$\frac{\frac{283}{64}}{2^2} = \frac{283}{256}$$

$$\frac{283}{256} - 1 = \frac{283}{256} - \frac{256}{256} = \frac{27}{256}$$

Mantissa: $\frac{27}{256_{10}} = \frac{1}{16} + \frac{1}{32} + \frac{1}{128} + \frac{1}{256} = 0001\ 1011\ 0000\ 0000\ 0000\ 00$

Big Endian: 0100 0000 1000 1101 1000 0000 0000 0000

Answer: 0000 0000 1000 0000 1000 1101 0100 0000

Hex: 0x00009fc1 = Big Endian: 0xc19f0000

Big Endian: 1100 0001 1001 1111 0000 0000 0000 0000

Sign: 1 = -

Exponent: $1000\ 0011_b = 128 + 2 + 1 = 131$

$$\text{Mantissa: } \frac{1}{8} + \frac{1}{16} + \frac{1}{32} + \frac{1}{64} + \frac{1}{128} = \frac{62}{256}$$

$$\frac{62}{256} + \frac{256}{256} = \frac{318}{256} = 1.2421875$$

Answer: $-1.2421875 \times 2^{131} \Rightarrow -1.2421875 \times 2^4 = -19.875$