

$$\begin{array}{r} 0.2 \\ \rightarrow -0.8 \\ \underline{-0.4} \\ +0.5 = \end{array}$$

$$0.8 \times 2 = 1.6 \quad \textcircled{1}$$

$$0.6 \times 2 = 1.2 \quad \textcircled{2}$$

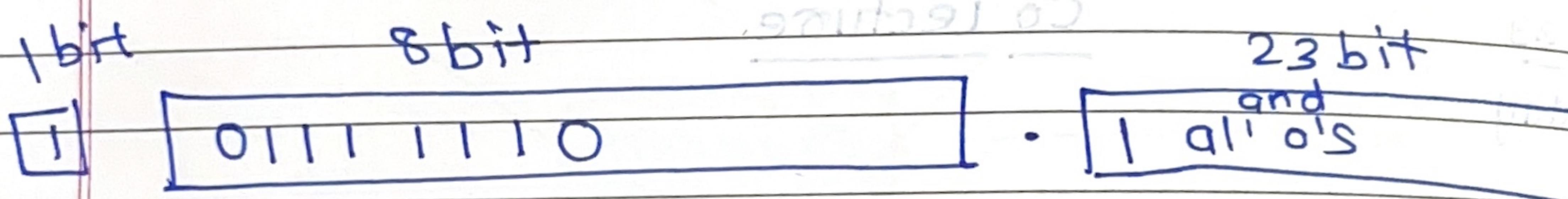
$$0.2 \times 2 = 0.4 \quad \textcircled{3}$$

$$0.4 \times 2 = 0.8 \quad \textcircled{4}$$

Sign = 1. + +

$$= (0.1100)_2$$

$$\begin{array}{r} 1.1 \times 2^{-1} \\ \underline{+ 1 \times 2^{-2}} \\ - 1 \\ \hline 126. \end{array}$$



$$0.3] \quad \boxed{129}$$

$$\begin{array}{r} 127 \\ + 2 \\ \hline 129 \end{array}$$

Sign

$$\boxed{1} \quad \boxed{1000 0001}$$

$$\boxed{0100 0000 \dots (11\cdots)}$$

$$\begin{array}{c} \text{Formula} \\ (-1)^S \times [1+F] \times 2^E \\ \text{Fraction} \end{array}$$

~~$$-0.1000 \times 2^2$$~~

~~$$1.0000 \times 2^9$$~~

Ans = -5

$$(-1)^1 \times 10$$

$$\begin{aligned} &= (-1)^1 \times [1 + (0.01) \times 2^2] \\ &= (-1)^1 \times [1.01] \times 4 \\ &= \underline{\underline{-4.04}} = -5 \end{aligned}$$

- * Add | subtract
- i) choose + and shift it equal to
- 2) set the

-II — self

* for addition

the two
to eight

$$0.1] \cdot A = 414 \\ B = 40E$$

→ A

$$\boxed{0} \quad \boxed{1000}$$

$$A = \boxed{0} \quad \boxed{10}$$

$$B = \boxed{0} \quad \boxed{10}$$

$$= 1 \cdot 6 \quad \textcircled{D}$$

$$= 1 \cdot 2 \quad \textcircled{F}$$

$$= 0 \cdot 4 \quad \textcircled{G}$$

$$= 0 \cdot 8 \quad \textcircled{H}$$

(128)

$$\begin{array}{r} 127 \\ - 1 \\ \hline 126 \end{array}$$

23 bit
and
1 all 0's

- * Add | Subtract Rule
- 1. choose the numbers with smaller exponent
- and shift its mantissa right a no. of steps equal to the difference in exponents.
- 2. set the exponent +

- II — self study.

* for addition

→ start

compose exponents of the two numbers, shift smaller number to right until its exponent.

[Incomplete].

$$\text{Q1] } A = 414C0000H. \quad \textcircled{4} \quad \textcircled{1} \quad \textcircled{E} \quad \textcircled{8} \quad 0$$

$$B = 40E80000H. \quad \underline{0} \underline{000} \underline{0000} \quad 1110 \quad 1000$$

$$A = \underline{\underline{0} \underline{100}} \underline{\underline{0001}} \underline{\underline{0} \underline{100}} \underline{\underline{1100}} \underline{\underline{0000}} \dots$$

Exponent
 $E-B$

$$A = \boxed{0} \quad \boxed{1000 \quad 0001}$$

Fraction

$$\begin{aligned} & [0.01] \times 2^2 \\ & \rightarrow \text{Binary} \\ & [01] \times 4 \end{aligned}$$

$$A = \boxed{0} \quad \boxed{1000 \quad 0010} \quad \boxed{1001100 \dots} \quad (12.75)$$

$$B = \boxed{0} \quad \boxed{1000 \quad 0001} \quad \boxed{110100 \dots} \quad (7.25)$$

Right shift

$$11101 \dots 000$$

