

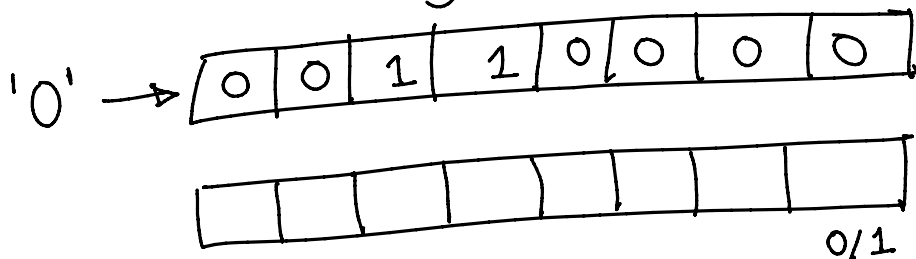
$$\cos(180^\circ) = -1$$

$$\Rightarrow \cos(\pi) = -1$$

$$\Rightarrow \pi = \cos^{-1}(-1)$$

$$\pi = \arccos(-1)$$

1 Byte \rightarrow



$$2 \times 2 \times 2 \times \dots \times 2 = 2^8 = 256$$

$$[0 \sim 255] \sim [0, 2^8 - 1]$$

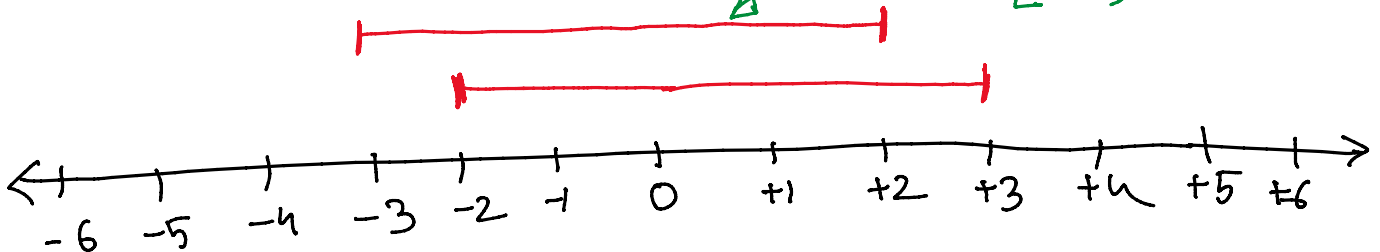
4 Bytes \rightarrow 32 bits \rightarrow $\begin{pmatrix} 32 \\ 2 \end{pmatrix}$

$$[0, 2^{32} - 1]$$

0, 1, 2, 3, 4, 5 0, 1, 2

$$[0, 5] \rightarrow [-3, +2]$$

$$[-2^{31}, +2^{31} - 1]$$



$$[5, 8] \rightarrow 8 - 5 + 1 = 4$$

$$[L, R] \rightarrow R - L + 1$$

$$'0' = 48$$

$$32 + 16$$

$$2^5 + 2^4$$

$$[110000] \sim 48$$

$$[0, 2^4 - 1] \rightarrow [0, 15] \rightarrow 16$$

$$\downarrow$$

$$[-2^3, +2^3 - 1] \rightarrow [-8, 7] \rightarrow$$

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

$$[L, R] \rightarrow R - L + 1$$

$$[0, 2^L - 1] \rightarrow [-2^{L-1}, 2^{L-1} - 1]$$

$$\Downarrow$$

$$2^L - 1 - 0 + 1$$

$$= 2^L$$

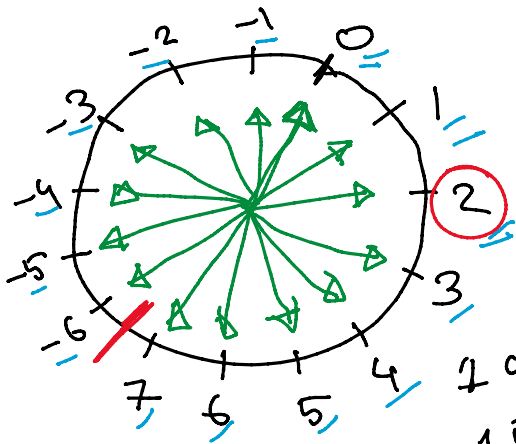
$$\Downarrow$$

$$\frac{2^{L-1}}{R} + \frac{2^{L-1}}{L} + 1$$

$$\Downarrow$$

$$2^{L-1} + 2^{L-1} = a + a = 2a$$

$$2 \cdot 2^{L-1} = 2^{1+L-1} = 2^L$$



$$\times 2 \rightarrow 14$$

$$[-6, 7] \rightarrow 7 - (-6) + 1 = 7 + 6 + 1 = 14$$

$$[-2^{15}, +2^{15} - 1]$$

$$[-6, 7] \rightarrow$$

$$14 \rightarrow 0$$

$$15 \rightarrow 1$$

$$16 \rightarrow 2$$

$$17 \rightarrow 3$$

$$[-32768, 32767] \rightarrow 65536$$

$$\times 2$$

$$=$$