

MSB bit 7

bit 0 LSB

1 0 0 1 0 1 1 0

byte unsigned
char
$$\Delta \quad \underbrace{1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0}_{\text{mask}}$$
mask = 0x80bit-wise
AND

1 0 0 0 0 0 0 0 == 0?

right shift of mask mask = mask >> 1;

0 1 0 0 0 0 0 0

	X		unsigned X
	0	0 0 0	0
	1	0 0 1	1
	2	0 1 0	2 = 0102
	3	0 1 1	3 = 1013
	-4	1 0 0	4 = 1114
	-3	1 0 1	5 = 1115
	-2	1 1 0	6 = 1116
	-1	1 1 1	7 = 1117

$$2^{10} \approx 1000$$

$$2^{20} \approx 1.000.000$$

$$2^{20} \approx 1,000,000$$

$$2^{30} \approx 1,000,000,000$$

$$2^{40} \approx 1,000,000,000,000$$

$$6.75_{10}$$

$$0.5 \quad \frac{1}{2}$$

$$0.25 \quad \frac{1}{4}$$

$$1 \overbrace{1011}_2 \times \boxed{4}$$

$$\begin{array}{r} 129 \text{ exponent} \\ - 127 \\ \hline 2 \end{array}$$