

1 - V
0 - F

E	F	V
F	F	F
V	F	V

$$\frac{0}{2} \dots \frac{0}{2} \frac{1}{2} \frac{1}{2} = 2^8 \quad 0, 1, 2, \dots, 2^8 - 1$$

$$-2^7, \dots, 2^7 - 1$$

3 bits
 $2^3 = 8$

000	0
001	1
010	2
011	3

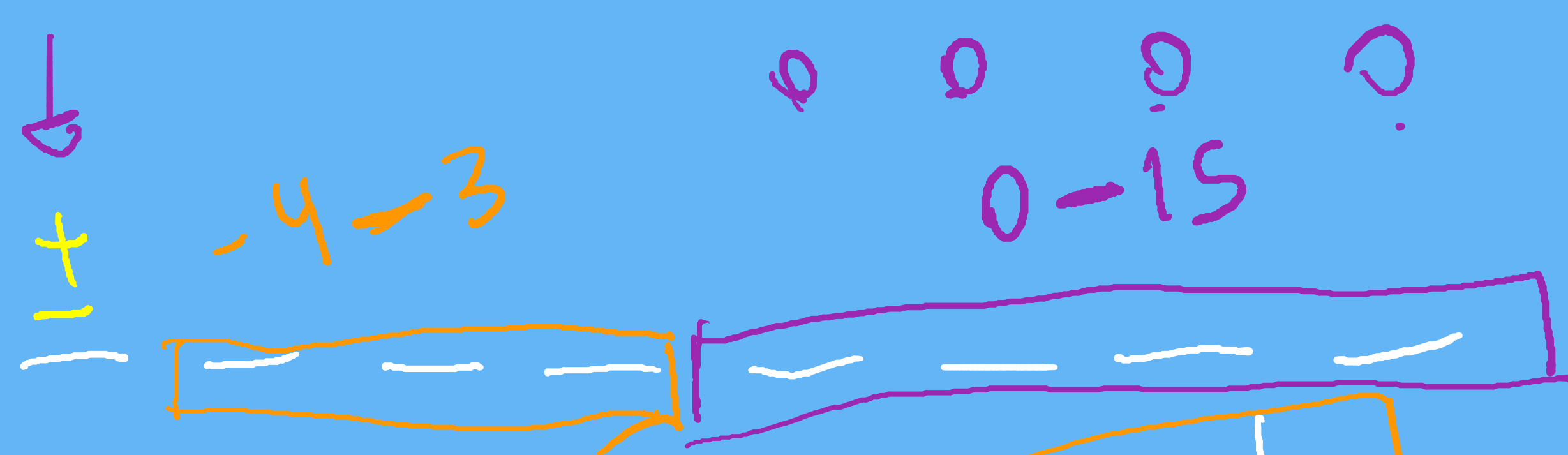
100	-4
101	-3
110	-2
111	-1

$$\begin{array}{r} 001 \\ + 010 \\ \hline 011 = 3 \end{array}$$

$$\begin{array}{r} 001 \\ + 001 \\ \hline 010 \end{array}$$

$$\begin{array}{r} 011 \quad 3 \\ + 001 \quad +1 \\ \hline 100 \quad -4 \end{array}$$

Overflow



$\pm 0. \text{mantissa} \times \text{base}$

$$(10)_2 \times (10)_2 = (100)_2$$

$$(101)_2 \times 2 = (1010)_2$$

$$\pm (0.111)_2 \times 2^3 = (111.1)_2 = 7.5$$

$$\pm (0.0001)_2 \times 2^{-4} = (0.00000001) \approx 0.00390625$$

menor valor t.q.
 $1 + \epsilon > 1$

$$\epsilon_{\text{MACHINE}} = \epsilon_M$$

$\forall x \in \mathbb{R}, \exists x' \text{ na máq. t.q.}$

$$|x - x'| \leq \epsilon_M |x|$$

$$0.111111\dots = 0.\bar{1}$$

$$3.14159$$

$$= 0.314159 \times 10^1$$

$$517 = 0.517 \times 10^3$$

$$-10.20 = -0.102 \times 10^2$$

$$0.0007 = 0.7 \times 10^{-3}$$