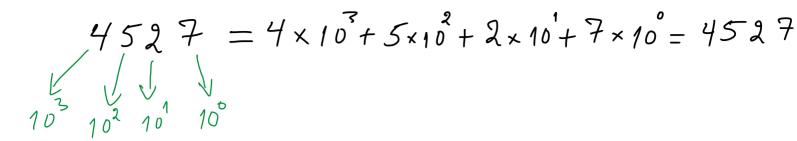
## Decimal numbers

Thursday, October 19, 2023 6:20 PM

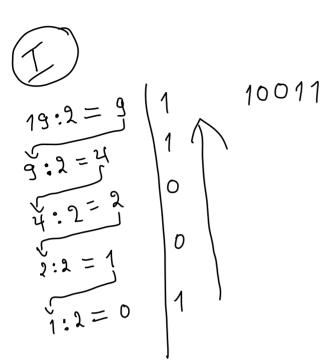


## Binary numbers

Thursday, October 19, 2023 6:56 PM

 $1101 = 1 \times 2^{3} + 1 \times 2^{2} + 0 \times 2^{1} + 1 \times 2^{6} = 8 + 4 + 1 = 13 \text{ rdecimae}$ 

0011	2 1 0 3 1 1	100 5101 6110 9111	2 0 0 0 3 1 0 0 1 10 1 0 1 0 11 1 0 1 1 12 1 1 0 0 13 1 1 0 1 14 1 1 1 0 15 1 1 1 1
			15 1 1 1 1



$$19 = ?$$

$$0 0 1 0 1 1$$

$$64 32 16 8 4 2$$

Hexadecimal numbers

Thursday, November 2, 2023 6:34 PM

$$0 \times 19 = 1 \times 16 + 9 \times 16 = 16 + 9 = 25$$

$$16$$

0 1 2 3 4 · · · · 9 A B C OE F	16 1 0 17 1 1 18 12 25 1 9 26 1 A 18 1 F 20 21 F	$0 \times 1A = 1 \times 16^{1} + 10 \times 1 = 16 + 10 = 26$ $0 \times 1A$ $0 \times 1A$ $0001 \ 1010$ $0 \times F = 15 (decimal) = 1111 (6 mary)$
14 E 15 F	255 F F	FF-FF-FF-FF-FF /

## Some useful binary numbers

Thursday, October 19, 2023 7:15 PM

$$1000000 = 128$$
 $11000000 = 138$ 
 $11100000 = 214$ 
 $11110000 = 240$ 
 $11111000 = 248$ 
 $11111100 = 252$ 
 $11111110 = 255$ 

Thursday, October 19, 2023 7:50 PM

192.168.5.15 255.255.0 /24
Network - shost 110000010101000000000101100001111 11111111000000 192.168.5.0 -> Network address 192.168.5.255 -> Broadcast address

255.255.255.0 = /24 255,255.0.0 = /16 255.0.0.0 = 18 255.192.0.0 = /10