

Carlos Luizguay Almeida Santos
20150465

Exercícios (1, 2, 3 e 4)

• Converter para sistema decimal

1) $(101)_2 = (5)_{10}$

$$1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0$$

$$4 + 1 = 5$$

2) $(1100)_2 = (12)_{10}$

$$1 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 0 \times 2^0$$

$$8 + 4 = 12$$

3) $(110100)_2 = (52)_{10}$

$$1 \times 2^5 + 1 \times 2^4 + 1 \times 2^2$$

$$= 52$$

4) $(1101001)_2 = (105)_{10}$

$$1 \times 2^6 + 1 \times 2^5 + 1 \times 2^3 + 1 \times 2^0 = 105$$

5) $(11010100)_2 = (212)_{10}$

$$1 \times 2^7 + 1 \times 2^6 + 1 \times 2^4 + 1 \times 2^2 = 212$$

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$$5) (11010100)_2 = 5) (10011, 01001)_2 =$$

$$5) 16 + 2 + 1 + 0,25 + 0,03125 = (19,28125)_{10}$$

- Converter para sistema binário

6) $(121, 75)_{10}$

Digitalizado com CamScanner

S T O O S S D
L M M I V S D

$$1) 315 = (100111011)_2$$

$$3) (1031)_{10} = (10000000111)_2$$

$$256 < 315 : 1$$

$$1024 < 1031 : 1$$

$$128 > 315 : 0$$

$$512 > 1031 : 0$$

$$64 > 315 : 0$$

$$256 > 1031 : 0$$

$$32 < 315 : 1$$

$$128 > 1031 : 0$$

$$16 < 315 : 1$$

$$64 > 1031 : 0$$

$$8 < 315 : 1$$

$$32 > 1031 : 0$$

$$4 > 315 : 0$$

$$16 > 1031 : 0$$

$$2 < 315 : 1$$

$$8 > 1031 : 0$$

$$1 = 315 : 1$$

$$4 < 1031 : 1$$

$$2 < 1031 : 1$$

$$1 = 1031 : 1$$

$$4) 13,125 = (10111,001)_2$$

$$16 < 13 : 1$$

$$0,125 \times 2 = 0,25$$

$$8 > 13 : 0$$

$$0,25 \times 2 = 0,5$$

$$4 < 13 : 1$$

$$0,5 \times 2 = 1,0$$

$$2 < 13 : 1$$

$$1 = 13 : 1$$

$$5) (45,9375)_{10} = (101101,1111)_2$$

$$32 < 45 : 1$$

$$0,9375 \times 2 = 1,875$$

$$16 > 45 : 0$$

$$0,875 \times 2 = 1,75$$

$$8 < 45 : 1$$

$$0,75 \times 2 = 1,5$$

$$4 < 45 : 1$$

$$0,5 \times 2 = 1,0$$

$$2 > 45 : 0$$

$$1 = 45 : 1$$

$$6) (121,75)_{10} = (1111001,11)_2$$

$$0,75 \times 2 = 1,5$$

$$16 < 121 : 1$$

$$2 > 121 : 0$$

$$0,5 \times 2 = 1,0$$

$$64 < 121 : 1$$

$$8 < 121 : 1$$

$$1 = 121 : 1$$

$$32 < 121 : 1$$

$$4 > 121 : 0$$



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|---|---|---|---|---|---|---|
| S | T | Q | Q | S | S | D |
| L | M | M | J | V | S | D |

Exercício 4

$$\beta = 10, t = 2, e_{\min} = -5, e_{\max} = 5$$

a) $x + y$, $x = 4,32$ e $y = 0,064$

b) $x - y$, $x = 372$ e $y = 371$

c) $x + y$, $x = 691$ e $y = 2,71$

A)

$$x = 0,432 \times 10^1 = (4 \times 10^{-1} + 3 \times 10^{-2} + 2 \times 10^{-3}) \times 10^1 =$$

$$y = 0,64 \times 10^{-1} = 0,64 \times 10^{-1}$$

$$= 4,384 = 0,4384 \times 10^1 = 0,44 \times 10^1$$

b) $x = 372 = 0,372 \times 10^3 = 0,38 \times 10^3$

$$y = 371 = 0,371 \times 10^3 = 0,37 \times 10^3$$

$$x - y = 0,01 \times 10^3$$

c) $x = 0,691 \times 10^3 = 0,70 \times 10^3$

$$y = 0,271 \times 10^1 = 0,28 \times 10^1$$

$$= 702,8$$

$$= 0,7028 \times 10^3 = 0,70 \times 10^3$$