

Lista 2 - TCC

$$a) (75)_{10} = \left. \begin{array}{l} 75/2, Q=37, R=1 \\ 37/2, Q=18, R=1 \\ 18/2, Q=9, R=0 \\ 9/2, Q=4, R=1 \\ 4/2, Q=2, R=0 \\ 2/2, Q=1, R=0 \\ 1/2, Q=0, R=1 \end{array} \right\} = (1001011)_2$$

$$b) (42)_{10} = \left. \begin{array}{l} 42/8, Q=5, R=2 \\ 5/8, Q=0, R=5 \end{array} \right\} = (52)_8$$

$$c) (501)_{10} = \left. \begin{array}{l} 501/16, Q=31, R=5 \\ 31/16, Q=1, R=15 \\ 1/16, Q=0, R=1 \end{array} \right\} = (F15)_{16} = (1F5)_{16}$$

$$d) (123)_{10} = \left. \begin{array}{l} 123/9, Q=13, R=6 \\ 13/9, Q=1, R=4 \\ 1/9, Q=0, R=1 \end{array} \right\} = (K46)_9$$

$$e) (23,795)_{10} = \begin{array}{l|l} 23/2, Q=11, R=1 & 0,795 \times 2 = 1,59 \\ 11/2, Q=5, R=1 & 0,59 \times 2 = 1,18 \\ 5/2, Q=2, R=1 & 0,18 \times 2 = 0,36 \\ 2/2, Q=1, R=0 & 0,36 \times 2 = 0,72 \\ 1/2, Q=0, R=1 & 0,72 \times 2 = 1,44 \end{array}$$

10111

11001

(10111,11001)₂

$$f) (356,82)_{10} = \left. \begin{array}{l} 356/8, Q=44, R=4 \\ 44/8, Q=5, R=4 \\ 5/8, Q=0, R=5 \end{array} \right\} 544$$

$$\left. \begin{array}{l} 0,82 \times 8 = 6,56 \\ 0,56 \times 8 = 4,48 \\ 0,48 \times 8 = 3,84 \\ 0,84 \times 8 = 6,72 \\ 0,72 \times 8 = 5,76 \end{array} \right\} 64365$$

$$= (544,64365)_8$$

$$g) (75,937)_{10} = \left. \begin{array}{l} 75/16, Q=4, R=11 \\ 4/16, Q=0, R=4 \end{array} \right\} 411$$

$$\left. \begin{array}{l} 0,937 \times 16 = 14,992 \\ 0,992 \times 16 = 15,872 \\ 0,872 \times 16 = 13,952 \\ 0,952 \times 16 = 15,232 \\ 0,232 \times 16 = 3,712 \end{array} \right\} 141513153 \quad \left. \begin{array}{l} 411 \\ 141513153 \end{array} \right\} = (411,141513153)_{16}$$

$$h) (213)_4 = 3 \times 4^0 + 1 \times 4^1 + 2 \times 4^2 = 3 + 4 + 32 = (39)_{10}$$

$$(39)_{10} = 39/4, Q=9, R=3 \} (43)_4 \\ 9/4, Q=2, R=1 \}$$

$$i) (43,12)_5 = 4 \times 5^1 + 3 \times 5^0 + 1 \times 5^{-1} + 2 \times 5^{-2} = 20 + 3 + 0,2 + 0,08 = (23,28)_{10}$$

$$(23,28)_{10} = 23/6, Q=3, R=5 \} 35 \\ 3/6, Q=0, R=3 \}$$

$$\left. \begin{array}{l} 0,28 \times 6 = 1,68 \\ 0,68 \times 6 = 4,08 \\ 0,08 \times 6 = 0,48 \\ 0,48 \times 6 = 2,88 \\ 0,88 \times 6 = 5,28 \end{array} \right\} 14025 \rightarrow (35,14025)_6$$

$$j) (37C)_{16} = \quad 3 \quad 7 \quad C$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ 0011 & 0111 & 1100 \end{array} \Rightarrow (001101111100)_2$$

$$k) (725)_8 = \quad 7 \quad 2 \quad 5$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ 111 & 010 & 101 \end{array} \Rightarrow (111010101)_2$$

$$l) (1001110)_2 = \quad 1 \quad 001 \quad 110$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ 1 & 1 & 6 \end{array} = (116)_8$$

$$m) (1010111)_2 = 0101 \quad 0111$$

$$\downarrow \quad \downarrow$$

$$5 \quad 7 \Rightarrow (57)_{10}$$

$$n) (101,1101)_2 = 101, \quad 110 \quad 100$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$5 \quad 6 \quad 4 \Rightarrow (5,64)_8$$

$$o) (20)_{16} = 2 \quad 0$$

$$\downarrow \quad \downarrow$$

$$0010 \quad 0000$$

$$000 \quad 100 \quad 000 \Rightarrow (040)_8 = (40)_8$$

$$p) (462,39)_{16} = 4 \quad 6 \quad 2, \quad 3 \quad 9$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

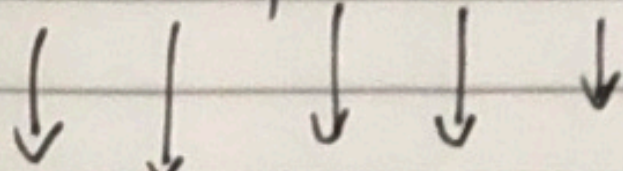
$$0100 \quad 0110 \quad 0010, \quad 0011 \quad 1001$$

$$010 \quad 001 \quad 100 \quad 010, \quad 001 \quad 110 \quad 010$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

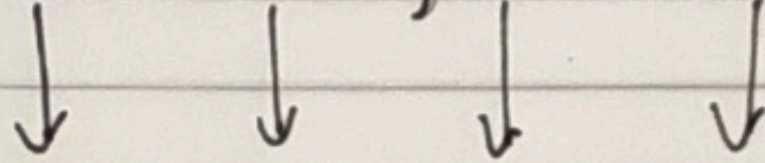
$$2 \quad 1 \quad 4 \quad 2, \quad 1 \quad 6 \quad 2 \Rightarrow (2142,162)_8$$

$$8) (25, 102)_8 = 25, 102$$



$$\underbrace{010\ 101, 001\ 000\ 010}$$

$$0001\ 0101, 0010\ 0001$$



$$1\ 5, 2\ 1 \Rightarrow (15, 21)_{16}$$