Lista 2 - TCC

a) $(75)_{10}$ = 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
$= (1001011)_2$

b) $(42)_{10}$ = 42/8, Q=5, R=2
5/8, Q=0, R=5
$= (52)_8$

c) $(501)_{10}$ = 501/16, Q=31, R=5
31/16, Q=1, R=15
1/16, Q=0, R=1
$= (F=15) = (1F5)_{16}$

d) $(123)_{10}$ = 123/9, Q=13, R=6
13/9, Q=1, R=4
1/9, Q=0, R=1
$= (146)_9$

e) $(23,795)_{10}$ = 23/2, Q=11, R=1
11/2, Q=5, R=1
5/2, Q=2, R=1
2/2, Q=1, R=0
1/2, Q=0, R=1

0,795 x 2 = 1,59
0,59 x 2 = 1,18
0,18 x 2 = 0,36
0,36 x 2 = 0,72
0,72 x 2 = 1,44

10111 11001

$(10111,11001)_2$

f) $(356,82)_{10}$ = 356/8, Q=44, R=4
44/8, Q=5, R=4
5/8, Q=0, R=5 } 544

0,82 × 8 = 6,56
0,56 × 8 = 4,48
0,48 × 8 = 3,84
0,84 × 8 = 6,72
0,72 × 8 = 5,76 } 64365

$= (544,64365)_8$

g) $(75,937)_{10}$ = 75/16, Q=4, R=11
4/16, Q=0, R=4 } 411

0,937 × 16 = 14,992
0,992 × 16 = 15,872
0,872 × 16 = 13,952
0,952 × 16 = 15,232
0,232 × 16 = 3,712 } 14151315 3

$= (411,141513153)_{16}$

h) $(213)_4 = 3\times4^0 + 1\times4^1 + 2\times4^2 = 3+4+32 = (39)_{10}$

$(39)_{10} = \begin{matrix} 39/9, Q=4, R=3 \\ 4/9, Q=0, R=4 \end{matrix}\Big\} (43)_9$

i) $(43,12)_5 = 4\times5^1 + 3\times5^0 + 1\times5^{-1} + 2\times5^{-2} = 20+3+0,2+0,08 = (23,28)_{10}$

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

$0,28\times6 = 1,68$
$0,68\times6 = 4,08$
$0,08\times6 = 0,48$
$0,48\times6 = 2,88$
$0,88\times6 = 5,28$
$\Big\} 14025 \longrightarrow (35,14025)_6$

g) $(37C)_{16}$: 3 → 0011, 7 → 0111, C → 1100 $\Rightarrow (001101111100)_2$

K) $(725)_8$: 7 → 111, 2 → 010, 5 → 101 $\Rightarrow (111010101)_2$

l) $(1001110)_2$: 001 → 1, 110 → 6 $= (116)_8$

m) $(1010111)_2$ = 0101 0111

5 7 $\Rightarrow (57)_{16}$

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

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

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

0010 0000

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

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

0100 0110 0010, 0011 1001

010 001 100 010, 001 110 010

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

g) $(25,102)_8 = 2\ 5\ ,\ 1\ 0\ 2$

$010\ 101,\ 001\ 000\ 010$

$0001\ 0101,0010\ 0001$

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