Lista 1 - ICC

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a) $2375_8 = 2\times8^3 + 3\times8^2 + 7\times8^1 + 5\times8^0 = 2\times512 + 3\times64 + 7\times8 + 5\times1 = 1024 + 192 + 56 + 5 = (1277)_{10}$.

b) $54_8 = 5\times8^1 + 4\times8^0 = 5\times8 + 4\times1 = (44)_{10}$.

c) $(101101)_2 = 1\times2^5 + 0\times2^4 + 1\times2^3 + 1\times2^2 + 0\times2^1 + 1\times2^0 = 32 + 0 + 8 + 4 + 0 + 1 = (45)_{10}$.

d) $(11100100)_2 = 1\times2^7 + 1\times2^6 + 1\times2^5 + 0\times2^4 + 0\times2^3 + 1\times2^2 + 0\times2^1 + 0\times2^0 = 128 + 64 + 32 + 4 = (228)_{10}$.

e) $(2D9)_{16} = 2\times16^2 + D\times16^1 + 9\times16^0 = 2\times256 + 13\times16 + 9\times1 = 512 + 208 + 9 = (729)_{10}$. Levando-se em consideração que $(D)_{16} = (13)_{10}$.

f) $(5F)_{16} = F\times16^0 + 5\times16^1 = 15\times1 + 5\times16 = 15 + 80 = (95)_{10}$. Sabendo que $(F)_{16} = (15)_{10}$

g) $(101,011)_2 = 1\times2^{-3} + 1\times2^{-2} + 0\times2^{-1} + 1\times2^0 + 0\times2^1 + 1\times2^2 = 0,125 + 0,25 + 1 + 4 = (5,375)_{10}$

h) $(11,1001)_2 = 1\times2^1 + 1\times2^0 + 1\times2^{-1} + 0\times2^{-2} + 0\times2^{-3} + 1\times2^{-4} = 2 + 1 + 0,0625 + 0,5 = (3,5625)_{10}$

i) $(34,1A)_{16} = 3\times16^1 + 4\times16^0 + 1\times16^{-1} + A\times16^{-2} = 48 + 4 + 0,0625 + 10\times0,00390625 = (52,1015625)_{10}$. Sabendo que $(A)_{16} = (10)_{10}$.

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j) $(23,074)_{16} = 2\times16^1 + 3\times16^0 + 0\times16^{-1} + 7\times16^{-2} + 4\times16^{-3} =$
$= 32 + 3 + 0,0625 + 0,27343375 + 0,000976562 =$
$= (35,336914062)_{10}$.

k) $(621,72)_8 = 6\times8^2 + 2\times8^1 + 1\times8^0 + 7\times8^{-1} + 2\times8^{-2} =$
$= 384 + 16 + 1 + 0,875 + 0,03125 = (401,90625)_{10}$.

l) $(42,102)_8 = 4\times8^1 + 2\times8^0 + 1\times8^{-1} + 0\times8^{-2} + 2\times8^{-3} =$
$= 32 + 2 + 0,125 + 0 + 0,00390625 = (34,12890625)_{10}$.

m) $(852)_9 = 8\times9^2 + 5\times9^1 + 2\times9^0 = 81 + 45 + 2 = (128)_{10}$.

n) $(34)_5 = 3\times5^1 + 4\times5^0 = 15 + 4 = (19)_{10}$.

o) $(201)_3 = 2\times3^2 + 0\times3^1 + 1\times3^0 = 18 + 0 + 1 = (19)_{10}$.

p) $(425,6)_7 = 4\times7^2 + 2\times7^1 + 5\times7^0 + 6\times7^{-1} = 196 + 14 + 5 +$
$+ 0,857142857 = (215,857142857)_{10}$.