

# Tema 1

$$2. a) \quad \overline{111000}_{(2)} = 1 \cdot 2^3 + 1 \cdot 2^4 + 1 \cdot 2^5 \\ = 8 + 16 + 32 \\ = 56_{(10)}$$

$$b) \quad \overline{4D}_{(16)} = 4(13)_{(16)} = 13 \cdot 16^0 + 4 \cdot 16 \\ = 13 + 64 \\ = 77$$

$$c) \quad \overline{233}_{(8)} = 3 \cdot 8^0 + 3 \cdot 8^1 + 2 \cdot 8^2 \\ = 3 + 24 + 2 \cdot 64 \\ = 27 + 128 \\ = 155_{(10)}$$

155	4			
12	38	4		
<u>=35</u>	36	9	4	
32	<u>=2</u>	8	2	4
<u>=3</u>		1	0	0
			2	

$$155_{(10)} = 2123_{(4)} \quad \Rightarrow \quad 233_{(8)} = 2123_{(4)}$$

$$d) 32(6) : 14(6) = ?$$

$$\begin{array}{r|l} 32 & 14 \\ \hline 32 & 2 \\ \hline = 0 & \end{array}$$

$$4 \cdot 2 = 8 \rightarrow 12(6)$$

$$1 \cdot 2 = 2(6)$$

$$32(6) : 14(6) = 2(6)$$