

Criptografie - Tema 2

Nr 2

$$2) a) \overline{11001}_{(2)} = ?_{(10)}$$

$$\begin{aligned}\overline{11001}_{(2)} &= 1 \cdot 2^0 + 0 \cdot 2^1 + 0 \cdot 2^2 + 1 \cdot 2^3 + 1 \cdot 2^4 = \\ &= 1 + 8 + 16 = 25\end{aligned}$$

$$b) \overline{1A}_{(16)} = ?_{(10)}$$

$$\overline{1A}_{(16)} = A \cdot 16^0 + 1 \cdot 16^1 = 10 \cdot 1 + 16 = 26$$

$$c) \overline{125}_{(7)} = ?_{(4)}$$

$$\overline{125}_{(7)} = 5 \cdot 7^0 + 2 \cdot 7^1 + 1 \cdot 7^2 = 5 + 14 + 49 = \overline{68}_{(10)}$$

$$\overline{68}_{(10)} = ?_{(4)}$$

$$\begin{array}{l} 68 : 4 = 17 : 4 = 4 : 4 = 1 \\ \begin{array}{r} 4 \\ \hline 28 \\ 28 \\ \hline 0 \end{array} \quad \begin{array}{r} 16 \\ \hline 1 \end{array} \quad \begin{array}{r} 4 \\ \hline 0 \end{array} \end{array}$$

$$\overline{125}_{(7)} = \overline{1010}_{(4)}$$

d) ^{scădute} $25 - 12$ în baza 8

$$\begin{array}{r} 25 - \\ 12 \\ \hline 13 \end{array}$$

$$\overline{25}_{(8)} - \overline{12}_{(8)} = \overline{13}_{(8)}$$