

# TIDT35\_2 task. pdf

## 1. feladat

$$N1 = 226$$

226	0
113	1
56	0
28	0
14	0
7	1
3	1
1	

11100010

$$N2 = 3950$$

3950	0
1975	1
987	1
493	1
246	0
123	1
61	1
30	0
15	1
7	1
3	1
1	

111101101110

$$N3 = 2025$$

2025	1
1012	0
506	0
253	1
126	0
63	1
31	1
15	1
7	1
3	1
1	

11111101001



## 2. feladat

$$N_1 = C37$$

$$\begin{array}{r} 111 \\ 16^2 16^1 16^0 \end{array}$$

$$\begin{array}{r} 12 \cdot 16^2 + 3 \cdot 16^1 + 15 \cdot 16^0 \\ 3072 + 48 + 15 \\ 3072 + \\ \quad 48 \\ + 15 \\ \hline 3135 \end{array}$$

$$\underline{110000111111}$$

$$\begin{array}{r} 2 \\ 3135 \mid 1 \\ 1564 \mid 1 \\ 783 \mid 1 \\ 391 \mid 1 \\ 195 \mid 1 \\ 97 \mid 1 \\ 48 \mid 0 \\ 24 \mid 0 \\ 12 \mid 0 \\ 6 \mid 0 \\ 3 \mid 1 \\ 1 \mid \end{array}$$

$$N_2 = B7A$$

$$\begin{array}{r} 111 \\ 11 \cdot 16^2 + 7 \cdot 16 + 10 \cdot 1 \end{array}$$

$$\begin{array}{r} 11 \cdot 256 + 7 \cdot 16 + 10 \cdot 1 \\ 2816 + 112 + 10 = 2938 \end{array}$$

$$\begin{array}{r} 2816 \\ 112 \\ + 10 \\ \hline 2938 \end{array}$$

$$\underline{101101111010}$$

$$\begin{array}{r} 2 \\ 2938 \mid 0 \\ 1469 \mid 1 \\ 734 \mid 0 \\ 367 \mid 1 \\ 183 \mid 1 \\ 91 \mid 1 \\ 45 \mid 1 \\ 22 \mid 0 \\ 11 \mid 1 \\ 5 \mid 1 \\ 2 \mid 0 \\ 1 \mid \end{array}$$

$$N_3 = F72$$

$$\begin{array}{r} 111 \\ 15 \cdot 16^2 + 7 \cdot 16 + 2 \end{array}$$

$$\begin{array}{r} 15 \cdot 256 + 7 \cdot 16 + 2 \\ 3840 + 112 + 2 = 3954 \end{array}$$

$$\underline{111111110010}$$

$$\begin{array}{r} 2 \\ 3954 \mid 0 \\ 2047 \mid 1 \\ 1020 \mid 0 \\ 510 \mid 0 \\ 255 \mid 1 \\ 127 \mid 1 \\ 63 \mid 1 \\ 31 \mid 1 \\ 15 \mid 1 \\ 7 \mid 1 \\ 3 \mid 1 \\ 1 \mid \end{array}$$