

Exercise 7 (Кислицина Юлия)

$$2002 = 11 \ 111 \ 010 \ 010_2$$

$$1001 = 01 \ 111 \ 101 \ 001_2$$

$$\oplus \begin{array}{r} 11 \ 111 \ 010 \ 010 \\ 01 \ 111 \ 101 \ 001 \\ \hline 10000 \ 111 \ 011 \end{array}$$

$$\text{Ответ ("туда")}: 10000 \ 111 \ 011_2 = 1083$$

$$\begin{array}{c} 0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10 \\ 10000 \ 111 \ 011 \end{array}$$

$$\begin{array}{l} 0: 1 \ 10 \\ 1: 1 \ 8 \\ 2: 1 \ 6 \\ 3: 1 \ 4 \\ 4: 1 \ 2 \\ 5: 0 \ 1 \\ 6: 1 \ 0 \\ 7: 0 \ 0 \\ 8: 0 \ 0 \\ 9: 1 \ 1 \\ 10: 0 \ 0 \end{array}$$

$$X_{10} = 2 + 16 + 64 + 128 + 256 + 512 + 1024 = 2002$$

$$\text{Ответ: ("обратно")}: 2002 = 1111 \ 010 \ 010_2$$

$$281 = 100 \ 011 \ 001_2$$

$$140 = 010 \ 001 \ 100_2$$

$$\oplus \begin{array}{r} 100 \ 011 \ 001 \\ 010 \ 001 \ 100 \\ \hline 110 \ 010 \ 101 \end{array}$$

$$\text{Ответ ("туда")}: 110010101_2 = 405$$

$$\begin{array}{c} 0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \\ 110 \ 010 \ 101 \end{array}$$

$$\begin{array}{l} 0: 1 \ 8 \\ 1: 0 \ 4 \\ 2: 0 \ 2 \\ 3: 0 \ 1 \\ 4: 1 \ 0 \\ 5: 1 \ 0 \\ 6: 0 \ 0 \\ 7: 0 \ 0 \\ 8: 1 \ 0 \end{array}$$

$$X_{10} = 1 + 8 + 16 + 256 = 281$$

$$\text{Ответ ("обратно")}: 281 = 100 \ 011 \ 001_2$$

$$\begin{array}{c} 0 \ 1 \ 2 \ 3 \\ 1111 \end{array}$$

$$\begin{array}{l} 0: 1 \\ 1: 0 \\ 2: 1 \\ 3: 0 \end{array}$$

$$X_{10} = 2 + 8 = 10$$

$$\text{Ответ ("обратно")}: 10 = 1010_2$$

$$10 = 1010_2$$

$$5 = 0101_2$$

$$\oplus \begin{array}{r} 1010 \\ 0101 \\ \hline 1111 \end{array}$$

$$\text{Ответ ("туда")}: 1111_2 = 15$$

$$63 = 111 \ 111_2$$

$$31 = 011 \ 111_2$$

$$\oplus \begin{array}{r} 111 \ 111 \\ 011 \ 111 \\ \hline 100 \ 000 \end{array}$$

$$\text{Ответ ("туда")}: 100 \ 000_2 = 32$$

$$\begin{array}{c} 0 \ 1 \ 2 \ 3 \ 4 \ 5 \\ 100 \ 000 \end{array}$$

$$\begin{array}{l} 0: 1 \\ 1: 1 \\ 2: 1 \\ 3: 1 \\ 4: 1 \\ 5: 1 \end{array}$$

$$X_{10} = 1 + 2 + 4 + 8 + 16 + 32 = 63$$

$$\text{Ответ ("обратно")}: 63 = 111 \ 111_2$$