

$$1. \quad 12345678_{10} = X_{16}$$

$$\begin{array}{r|l} 12345678 & 16 \\ \hline 12345664 & 771604 \\ \hline 14 & 771600 \\ \hline 4 & 48225 \\ \hline 4 & 48224 \\ \hline 1 & 3014 \\ \hline 1 & 3008 \\ \hline 6 & 188 \\ \hline 6 & 176 \\ \hline 12 & 11 \\ \hline & B \end{array}$$

$$12345678_{10} = BC614E_{16}$$

$$10000000_{10} = Y_{16}$$

$$\begin{array}{r|l} 10000000 & 16 \\ \hline 10000000 & 62500 \\ \hline 0 & 62496 \\ \hline 0 & 3906 \\ \hline 4 & 3904 \\ \hline 4 & 244 \\ \hline 4 & 240 \\ \hline & 15 \\ \hline & F \end{array}$$

$$10000000_{10} = F4240_{16}$$

$$2. \quad 12345678_{16} = X_{10}$$

$$\begin{aligned} 12345678_{16} &= (1 \times 16^7) + (2 \times 16^6) + (3 \times 16^5) + (4 \times 16^4) + (5 \times 16^3) + (6 \times 16^2) + (7 \times 16^1) + (8 \times 16^0) = \\ &= 268435456 + 33554432 + 3145728 + 262144 + 20480 + 1536 + 112 + 8 = \\ &= 305419896 \end{aligned}$$

$$12345678_{16} = 305419896_{10}$$

$$10000000_{16} = Y_{10}$$

$$\begin{aligned} 10000000_{16} &= (1 \times 16^6) + (0 \times 16^5) + (0 \times 16^4) + (0 \times 16^3) + (0 \times 16^2) + (0 \times 16^1) + (0 \times 16^0) = \\ &= 1 \times 16^6 = 16777216 \end{aligned}$$

$$10000000_{16} = 16777216_{10}$$

3. Слученного ^Aмалюка и ^Bмёда и можмо без ^Cмёда
A & B & C

4.

$$A \rightarrow B = \neg A \vee B$$

A	B	$A \rightarrow B$
0	0	1
0	1	1
1	0	0
1	1	1

=

A	B	$\neg A$	$\neg A \vee B$
0	0	1	1
0	1	1	1
1	0	0	0
1	1	0	1

$$A \leftrightarrow B = (A \wedge B) \vee (\neg A \wedge \neg B)$$

A	B	$A \wedge B$
0	0	0
0	1	0
1	0	0
1	1	1

$\neg A$	$\neg B$	$\neg A \wedge \neg B$
1	1	1
1	0	0
0	1	0
0	0	0

\vee

$A \wedge B$	$\neg A \wedge \neg B$	$(A \wedge B) \vee (\neg A \wedge \neg B)$
0	1	1
0	0	0
0	0	0
1	0	1

$$= \frac{A \leftrightarrow B}{1 \ 0 \ 0 \ 1}$$

$$6. \quad X = (B \rightarrow A) \cdot (\overline{A+B}) \cdot (A \rightarrow C) =$$

$$= (!B + A) \cdot (!A \cdot !B) \cdot (!A + C) =$$

$$= (!B \cdot !A + A \cdot !A) \cdot !B(!A + C) =$$

$$= !B \cdot !A (!A + C) = !B \cdot !A.$$



`X = !A + !A*!B + A*B`



A	B	!A	!A*!B	A*B	X
0	0	1	1	0	1
0	1	1	0	0	1
1	0	0	0	0	0
1	1	0	0	1	1

