

①

$$12345678_{10} \rightarrow ?_{16}$$

$ \begin{array}{r} 12345678 \mid 16 \\ \underline{112} \\ 114 \\ \underline{112} \\ 25 \\ \underline{16} \\ 96 \\ \underline{96} \\ 78 \\ \underline{64} \\ \textcircled{14} \leftarrow E \end{array} $	$ \begin{array}{r} 771604 \mid 16 \\ \underline{64} \\ 131 \\ \underline{128} \\ 36 \\ \underline{32} \\ 40 \\ \underline{32} \\ 84 \\ \underline{80} \\ \textcircled{4} \end{array} $	$ \begin{array}{r} 48225 \mid 16 \\ \underline{48} \\ 22 \\ \underline{16} \\ 65 \\ \underline{64} \\ \textcircled{1} \end{array} $	$ \begin{array}{r} 3014 \mid 16 \\ \underline{16} \\ 141 \\ \underline{128} \\ 134 \\ \underline{128} \\ \textcircled{6} \end{array} $	$ \begin{array}{r} 188 \mid 16 \\ \underline{16} \\ 28 \\ \underline{16} \\ \textcircled{12} \rightarrow C \end{array} $	$ \begin{array}{r} 1 \mid 16 \\ \underline{16} \\ \textcircled{1} \rightarrow B \end{array} $
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$$\Rightarrow 12345678_{10} \rightarrow BC614E_{16}$$

② $1000000_{10} \rightarrow ?_{16}$

$ \begin{array}{r} 1000000 \mid 16 \\ \underline{96} \\ 40 \\ \underline{32} \\ 80 \\ \underline{80} \\ \textcircled{0} \end{array} $	$ \begin{array}{r} 62500 \mid 16 \\ \underline{48} \\ 145 \\ \underline{144} \\ 100 \\ \underline{96} \\ \textcircled{4} \end{array} $	$ \begin{array}{r} 3906 \mid 16 \\ \underline{32} \\ 70 \\ \underline{64} \\ 66 \\ \underline{64} \\ \textcircled{2} \end{array} $	$ \begin{array}{r} 244 \mid 16 \\ \underline{16} \\ 84 \\ \underline{80} \\ \textcircled{4} \end{array} $	$ \begin{array}{r} 15 \mid 16 \\ \underline{16} \\ \textcircled{15} \rightarrow F \end{array} $
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$$\Rightarrow 1000000_{10} \rightarrow F4240_{16}$$

$$\textcircled{3} \ 12345678_{16} \rightarrow_{10} ?$$

$$\begin{array}{cccccccc} 7 & 6 & 5 & 4 & 3 & 2 & 1 & 0 \\ 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \end{array} = 1 \cdot 2^{28} + 2 \cdot 2^{25} + 3 \cdot 2^{20} + 2^{18} + 5 \cdot 2^{12} + 3 \cdot 2^9 + 7 \cdot 2^4 + 8 = (\text{количество}) =$$

$$= 268\ 435\ 456 + 33\ 554\ 932 + 3\ 145\ 728 + 262\ 144 + 20\ 980 + 1536 + 112 + 8 = 305\ 419\ 896$$

$$12345678_{16} \rightarrow 305\ 419\ 896_{10}$$

$$\textcircled{4} \ 100\ 0000_{16} \rightarrow_{10} ?$$

$$\begin{array}{cccccc} 6 & 5 & 4 & 3 & 2 & 1 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 & 0 \end{array} = 16^6 = 2^{24} = 16\ 777\ 216$$

$$100\ 0000_{16} \rightarrow 16\ 777\ 216_{10}$$

⑤ " (гущенного молока, и меда и можно без хлеба,"
 $A \quad \&\& \quad B \quad \&\& \quad \overline{C}$

$$Y = A \&\& B \&\& \overline{C}$$

~~⑥ $A \rightarrow B = !A \vee B$~~

~~| A | B | $A \vee B$ | $!A \vee B$ |
|---|---|------------|-------------|
| 0 | 0 | 0 | 1 |
| 0 | 1 | 1 | 1 |
| 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 1 |~~

⑥ $A \rightarrow B = !A \vee B$

A	B	$!A$	$!A \vee B$
0	0	1	1
0	1	1	1
1	0	0	0
1	1	0	1

⑦ $A \leftrightarrow B = (A \&\& B) \vee (!A \&\& !B)$

A	B	$!A$	$!B$	$A \&\& B$	$!A \&\& !B$	$(A \&\& B) \vee (!A \&\& !B)$
0	0	1	1	0	1	1
0	1	1	0	0	0	0
1	0	0	1	0	0	0
1	1	0	0	1	0	1

⑧ $A \oplus B = !(A \leftrightarrow B) = ![(A \&\& B) \vee (!A \&\& !B)] =$
 $= !(A \&\& B) \&\& !(!A \&\& !B) = (!A \vee !B) \&\& (A \vee B)$

⑨ $X = (B \rightarrow A) \overline{(A + B)} \cdot (A \rightarrow C) = (\overline{B} + A) \cdot (\overline{A} \overline{B}) \cdot (\overline{A} + C) =$
 $= \overline{A} \overline{B} (\overline{A} \overline{B} + \overline{B} C + AC) = \overline{A} \overline{B} + \overline{A} \overline{B} C = \overline{A} \overline{B}$