

v1.1

$$\begin{array}{r} 12345678 | 16 \\ \hline 12345668 | 771604 | 16 \\ 14 | 771600 | 48225 | 16 \\ 4 | 48224 | 3024 | 16 \\ 1 | 3008 | 188 | 16 \\ 6 | 176 | 11 | 16 \\ \hline & & 12 & \end{array}$$

$$12345678_{10} = BC614E$$

v1.2

$$\begin{array}{r} 10000000 | 16 \\ \hline 1000000 | 62500 | 16 \\ 0 | 82496 | 3906 | 16 \\ 4 | 3904 | 244 | 16 \\ 2 | 240 | 4 | 16 \\ \hline & & 15 & \end{array}$$

$$10000000_{10} = F4240$$

~2.1

$$\begin{aligned}12345678_{16} &= 1 \cdot 16^7 + 2 \cdot 16^6 + 3 \cdot 16^5 + 4 \cdot 16^4 + 5 \cdot 16^3 \\&+ 6 \cdot 16^2 + 7 \cdot 16^1 + 8 \cdot 16^0 = 268435456 + \\&+ 33554432 + 3145728 + 262144 + 20480 + \\&+ 1536 + 112 + 8 = 305419896_{10}\end{aligned}$$

~2.2.

$$1000000_{16} = 1 \cdot 16^6 = 16777216_{10}$$

~3.

Сигнальное молоко - A

Мяг - B

Холод - C

A & B ~~или~~ & !C

~4.

$$A \rightarrow B = !A \parallel B$$

A	B	$!A \parallel B$	$!A$
0	0	1	1
1	0	0	0
0	1	1	1
1	1	1	0

$$A \leftrightarrow B = (A \& \& B) \parallel (\neg A \& \& \neg B)$$

A	B	$A \& \& B$	$\neg A \& \& \neg B$	$\neg A$	$\neg B$	$A \leftrightarrow B$
0	0	0	1	1	1	1
0	1	0	0	1	0	0
1	0	0	0	0	1	0
1	1	1	0	0	0	1

v6

$$\begin{aligned}
 X &= (B \rightarrow A) \cdot \overline{(A + B)} \cdot (A \rightarrow C) = \\
 &= (\bar{B} + A) \cdot (\bar{A} \cdot \bar{B}) \cdot (\bar{A} + C) = \\
 &= (\bar{A} \cdot \bar{B} \cdot B + \bar{A} \cdot \bar{B} \cdot A) \cdot (\bar{A} + C) = \\
 &= \bar{A} \cdot \bar{B} \cdot \bar{A} + \bar{A} \cdot \bar{B} \cdot C = \bar{A} \cdot \bar{B} \cdot (1 + C) = \\
 &= \bar{A} \cdot \bar{B}
 \end{aligned}$$