

№1

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

12345678 / 16	771604	14 (E)
771604 / 16	48225	4
48225 / 16	3014	1
3014 / 16	188	6
188 / 16	11	12 (C)
11 / 16	0	11 (B)

$12345678_{10} \rightarrow BC614E_{16}$

$1000000_{10} \rightarrow ?_{16}$

1000000 / 16	62500	0
62500 / 16	3906	4
3906 / 16	244	2
244 / 16	15	4
15 / 16	0	15 (F)

$1000000_{10} \rightarrow F4240_{16}$

№2

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

$1234567816 = (1 \times 16^7) + (2 \times 16^6) + (3 \times 16^5) + (4 \times 16^4) + (5 \times 16^3) + (6 \times 16^2) + (7 \times 16^1) + (8 \times 16^0) = 268435456 + 33554432 + 3145728 + 262144 + 20480 + 1536 + 112 + 8 = 305419896_{10}$

$12345678_{16} \rightarrow 305419896_{10}$

$1000000_{16} \rightarrow ?_{10}$

$100000016 = (1 \times 16^6) + (0 \times 16^5) + (0 \times 16^4) + (0 \times 16^3) + (0 \times 16^2) + (0 \times 16^1) + (0 \times 16^0) = 16777216 + 0 + 0 + 0 + 0 + 0 + 0 = 1677721610$

$1000000_{16} \rightarrow 1677721610_{10}$

№3

Сгущенного молока && меда && !хлеба

№4

Доказать тождества $A \rightarrow B = !A||B$, $A \leftrightarrow B = (A \&\& B) || (!A \&\& !B)$

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

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

№5

Найти эквивалент для \oplus ?

A	B	$A \oplus B$	$(A \&\& !B) (!A \&\& B)$
0	0	0	$0*1+1*0=0$
0	1	1	$0*0+1*1=1$
1	0	1	$1*1+0*0=1$
1	1	0	$0*0+0*0=0$

№6

$(A \rightarrow B) * !(A + B) * (A \rightarrow C)$

$(B \rightarrow A) * !A * !B * (!A + C) = (!B * !A + A * !A) * !B * (!A + C) = (!B * !A + 0) * !B * (!A + C) = !A * !B * !B * (!A + C) = !B * !A * (!A + C) = !B * !A \leftrightarrow !A * !B$
 $!A * !B$