

① BCD to Binary

① $(\underline{1001} \ \underline{0110}) \leftarrow \text{BCD}$
 $\quad \quad 9 \quad 6 \leftarrow \underline{\text{Decimal}}$

2	96	
	48	0
	24	0
	12	0
	6	0
	3	0
	1	1

$\uparrow (1100000) \text{ Binary}$

② $(0110 \ 0001) \text{BCD}$
 $\quad \quad (?)_{10}$
 $\quad \quad (61)_{10}$
 $\quad \quad (111101) \text{ Binary}$

① Binary to BCD

① $(10000110)_2 \rightarrow (?) \text{BCD}$
 $\quad \quad 2^7 \ 2^6 \ 2^5 \ 2^4 \ 2^3 \ 2^2 \ 2^1 \ 2^0$
 $\quad \quad = \ 1 \ 0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 0$

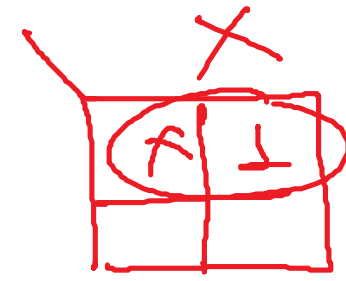
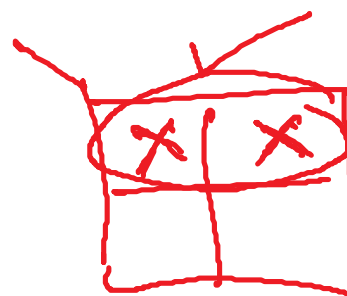
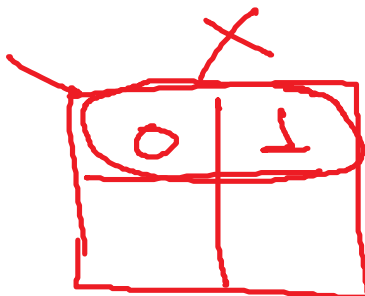
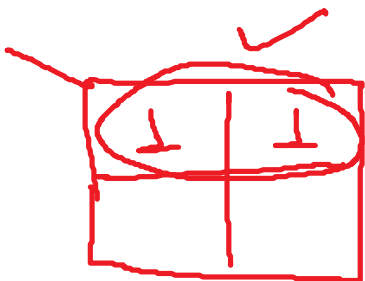
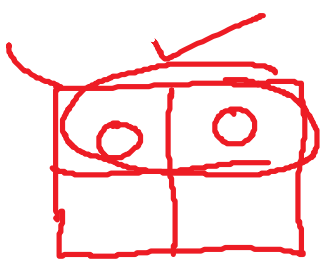
$$= 1 \times 2^7 + 1 \times 2^2 + 1 \times 2^1$$

$$= (134)_{10}$$

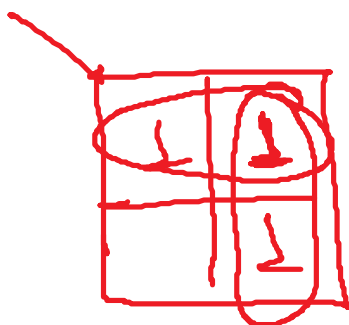
$\swarrow \quad \downarrow \quad \searrow$
 $(0001 \ 0011 \ 0100) \text{BCD}$

Rules of K-Map

Rule ①



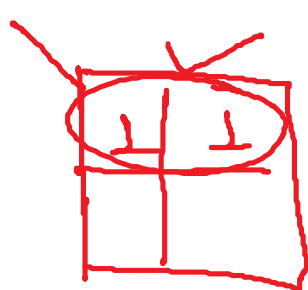
Rule ②



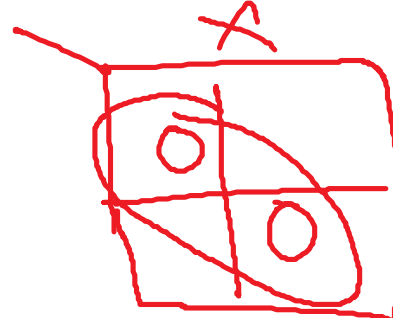
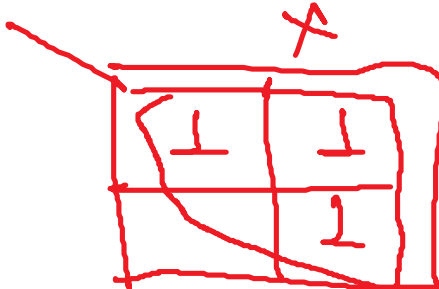
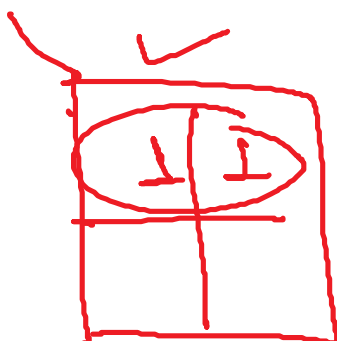
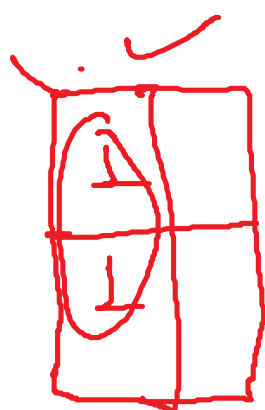
Rule ③

power of 2

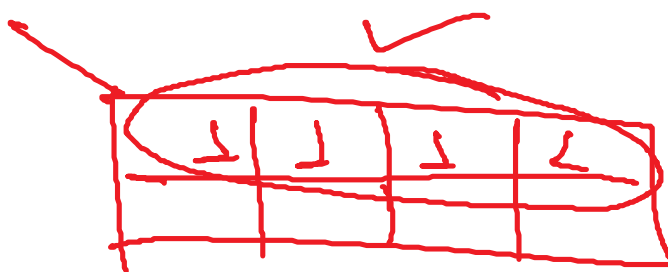
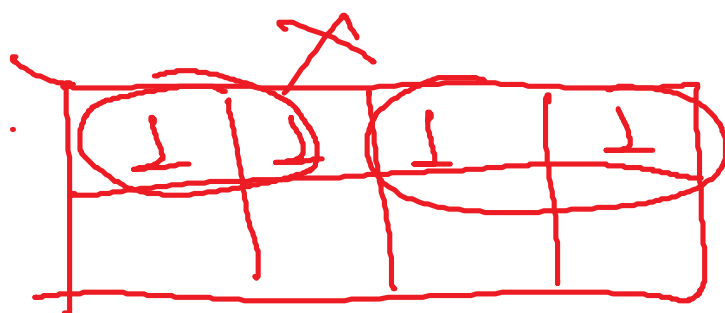
1, 2, 4, 8, 16 - - - - -



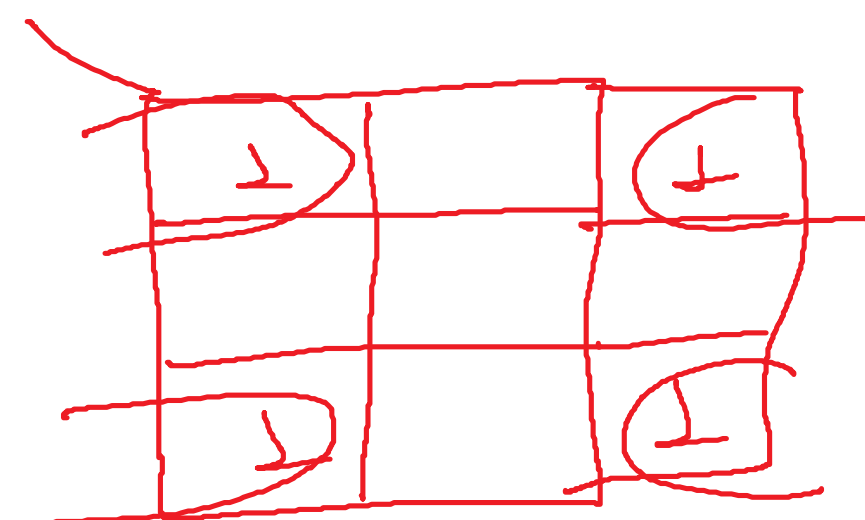
④ Rule



⑤ Rule:



⑥ Rule



Rule ⑦ As few group as possible