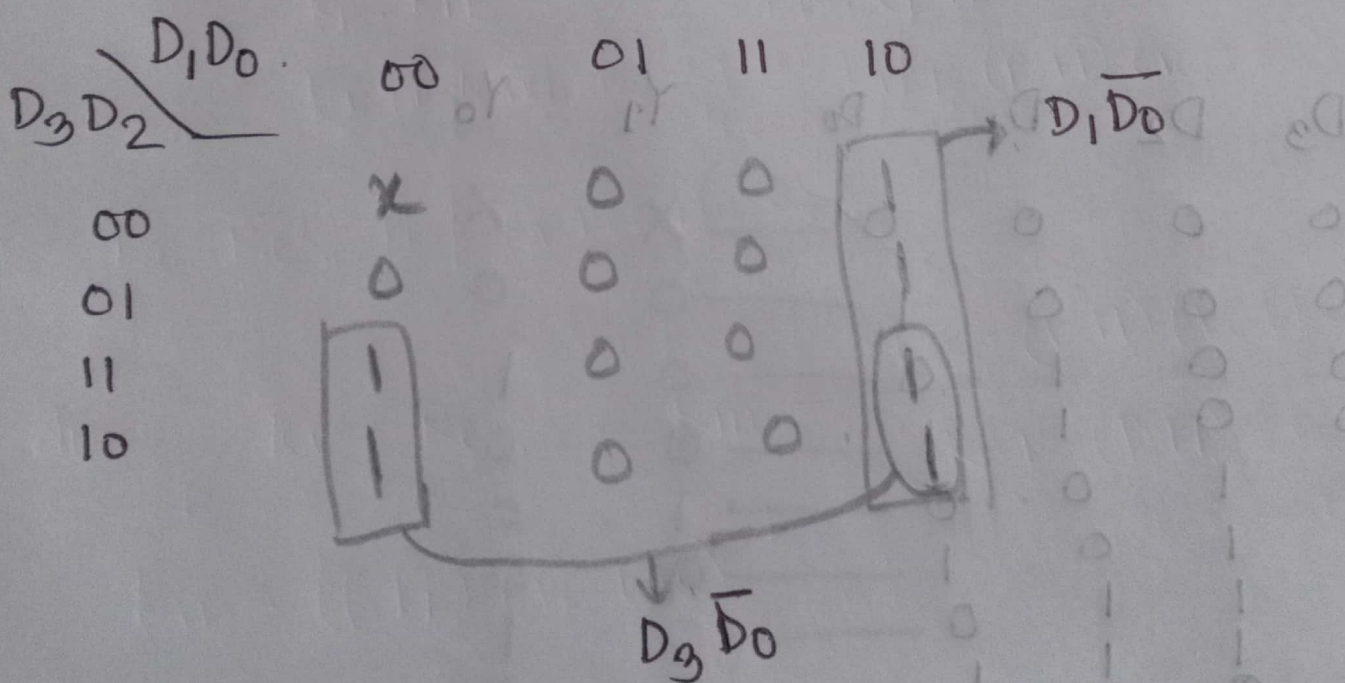


Problem 2. $\rightarrow D_0, D_1, D_3, D_2 \rightarrow$ descending priority.

$$\therefore D_0 > D_1 > D_3 > D_2$$

D_3	D_2	D_1	D_0	Y_1	Y_0	Enable pin.
0	0	0	0	x	x	0
x	x	x	1	0	0	1
x	x	1	0	0	1	1
0	1	0	0	1	0	1
1	x	0	0	1	1	1

K-map for $Y_0 \rightarrow$



$$\therefore Y_0 = D_3 \bar{D}_0 + D_1 \bar{D}_0$$

K map for y_1 :

$D_3 D_2 \backslash D_1 D_0$	00	01	11	10
00	X	0	0	0
01	1	0	0	0
11	1	0	0	0
10	1	0	0	0

$\bar{D}_1 \bar{D}_0$

$$y_1 = \bar{D}_1 \bar{D}_0$$

D_3	D_2	D_1	D_0	y_1	y_0
0	0	0	0	X	X
0	0	0	1	0	0
0	0	1	0	0	1
0	0	1	1	0	0
0	1	0	0	0	0
0	1	0	1	0	0
0	1	1	0	0	0
0	1	1	1	0	0
1	0	0	0	0	0
1	0	0	1	0	0
1	0	1	0	0	0
1	0	1	1	0	0
1	1	0	0	0	0
1	1	0	1	0	0
1	1	1	0	0	0
1	1	1	1	0	0