Multiplexer using Boolean function

$$f(A, B, C) = \Sigma m(0, 1, 3, 5, 7) \quad \text{using 8:1 multiplexer}$$

logic '1'

D_0
D_1
D_2
D_3
D_4
D_5
D_6
D_7

8×1 mox

$Y = 0$

logic '0'

A B C
1 1 0
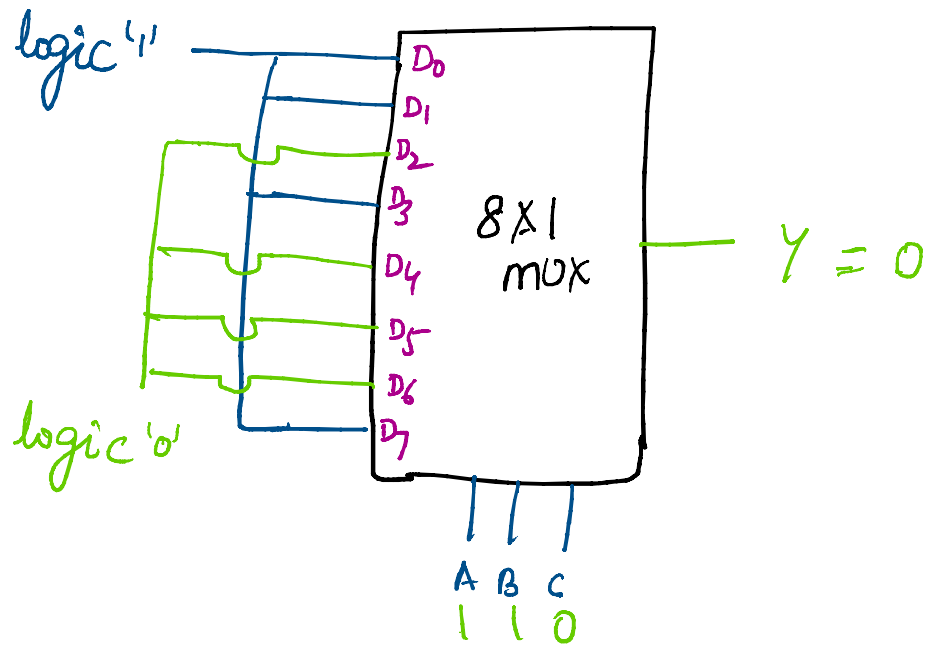
$f(A, B, C) = \Sigma m(0, 1, 3, 5, 7)$ using $\underline{4:1 \text{ mux}}$

$\underset{2 \times 1}{\textcircled{2}} \longrightarrow$ selection lines

Let us take B & C are selection lines

A —Do——→ D_0

'1' ——→ D_1 4 X 1 mux ——— Y

0 ——→ D_2

'1' ——→ D_3

B   C
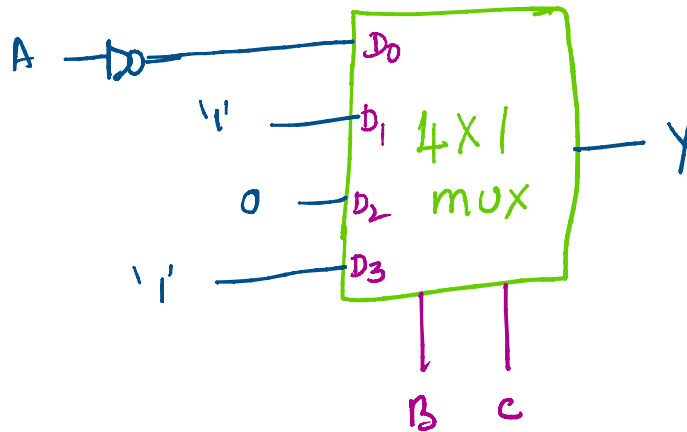
	D_0	D_1	D_2	D_3
$\bar{A}$	⓪	①	2	③
A	4	⑤	6	⑦
	$\bar{A}$	1	0	1

↓

$\bar{A} + A = 1$