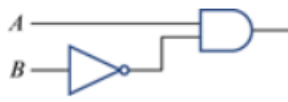


1 a



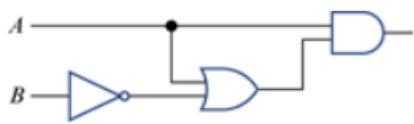
b



c

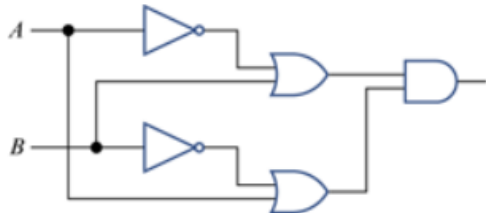


d

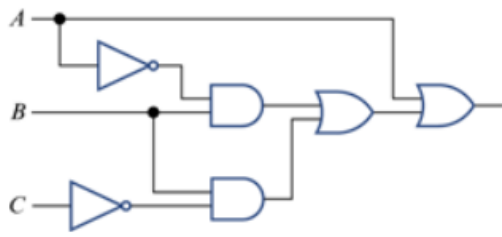


Note: Equivalent to A

e



f



Note: Equivalent to $A \vee B$

2 a

$$\neg X \vee (X \wedge Y) \equiv \neg X \vee Y$$

X	Y	$\neg X$	$X \wedge Y$	$\neg X \vee (X \wedge Y)$
0	0	1	0	1
0	1	1	0	1
1	0	0	0	0
1	1	0	1	1

b

$$\neg A \wedge (A \vee B) \equiv \neg A \wedge B$$

A	B	$\neg A$	$A \vee B$	$\neg A \wedge (A \vee B)$
0	0	1	0	0
0	1	1	1	1
1	0	0	1	0
1	1	0	1	0

c $\neg(A \wedge B)$

A	B	$A \wedge B$	$\neg(A \wedge B)$
0	0	0	1
0	1	0	1
1	0	0	1
1	1	1	0