

Question 1: Fill in the missing entries in the truth table for the expression: A and not (B or (C and D and E))

A	B	C	D	E	Q
0	0	0	0	0	0
0	0	0	0	1	0
0	0	0	1	0	?
0	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	1	0	0	1	0
0	1	0	1	0	?
0	1	0	1	1	0
0	1	1	0	0	?
0	1	1	0	1	0
0	1	1	1	0	0
0	1	1	1	1	0
1	0	0	0	0	1
1	0	0	0	1	1
1	0	0	1	0	1
1	0	0	1	1	1
1	0	1	0	0	1
1	0	1	0	1	1
1	0	1	1	0	1
1	0	1	1	1	0
1	1	0	0	0	?
1	1	0	0	1	?
1	1	0	1	0	0
1	1	0	1	1	0
1	1	1	0	0	0
1	1	1	0	1	0
1	1	1	1	0	0
1	1	1	1	1	0

Answer:

A	B	C	D	E	Q
0	0	0	0	0	0
0	0	0	1	0	0
0	0	0	1	0	0
0	0	1	0	1	0
0	0	1	0	1	0
0	0	1	1	0	0
0	0	1	1	0	0
0	1	0	0	1	0
0	1	1	0	0	0
0	1	1	1	0	0
0	1	1	1	0	0
1	0	0	0	1	0
1	0	0	0	1	0
1	0	0	1	0	1
1	0	0	1	0	1
1	0	1	0	0	1
1	0	1	0	0	1
1	0	1	1	0	1
1	0	1	1	0	1
1	1	0	0	1	0
1	1	0	0	1	0
1	1	0	1	0	0
1	1	0	1	0	0
1	1	1	0	0	0
1	1	1	0	0	0
1	1	1	1	0	0
1	1	1	1	0	0

Question 2: Fill in the missing entries in the truth table for the expression: not (A or not (B and C)) and D and E

A	B	C	D	E	Q
0	0	0	0	0	0
0	0	0	0	1	0
0	0	0	1	0	0
0	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	1
0	1	0	1	0	0
0	1	0	1	1	0
0	1	1	0	0	0
0	1	1	0	1	1
0	1	1	1	0	1
0	1	1	1	1	1
1	0	0	0	0	0
1	0	0	0	1	0
1	0	0	1	0	0
1	0	0	1	1	0
1	0	1	0	0	0
1	0	1	0	1	0
1	0	1	1	0	0
1	0	1	1	1	0
1	1	0	0	0	0
1	1	0	0	1	0
1	1	0	1	0	0
1	1	0	1	1	0
1	1	1	0	0	0
1	1	1	0	1	0
1	1	1	1	0	0
1	1	1	1	1	0

Answer:

A	B	C	D	E	Q
0	0	0	0	0	0
0	0	0	1	1	0
0	0	0	1	1	0
0	0	1	0	1	0
0	0	1	0	1	0
0	0	1	1	0	0
0	0	1	1	0	0
0	1	0	0	1	0
0	1	0	0	1	0
0	1	0	1	0	0
0	1	0	1	0	0
0	1	1	0	1	0
0	1	1	0	1	0
0	1	1	1	0	0
1	0	0	1	1	1
1	0	0	0	1	0
1	0	0	0	1	0
1	0	1	0	0	0
1	0	1	0	0	0
1	0	1	1	0	0
1	1	0	1	0	0
1	1	0	1	0	0
1	1	1	0	1	0
1	1	1	0	1	0
1	1	1	1	0	0
1	1	1	1	0	0

Question 3: Fill in the missing entries in the truth table for the expression: not A and (B and C or D or E)

A	B	C	D	E	Q
0	0	0	0	0	0
0	0	0	0	1	1
0	0	0	1	0	1
0	0	0	1	1	1
0	0	1	0	0	?
0	0	1	0	1	?
0	0	1	1	0	1
0	0	1	1	1	1
0	1	0	0	0	0
0	1	0	0	1	1
0	1	0	1	0	1
0	1	0	1	1	1
0	1	1	0	0	1
0	1	1	0	1	?
0	1	1	1	0	1
0	1	1	1	1	1
1	0	0	0	0	0
1	0	0	0	1	0
1	0	0	1	0	0
1	0	0	1	1	0
1	0	1	0	0	0
1	0	1	0	1	?
1	0	1	1	0	?
1	0	1	1	1	0
1	1	0	0	0	0
1	1	0	0	1	0
1	1	0	1	0	0
1	1	0	1	1	0
1	1	1	0	0	0
1	1	1	0	1	0
1	1	1	1	0	0
1	1	1	1	1	0

Answer:

A	B	C	D	E	Q
0	0	0	0	0	0
0	0	0	1	0	1
0	0	0	1	0	1
0	0	1	0	1	1
0	0	1	0	1	1
0	0	1	1	0	1
0	1	0	1	0	1
0	1	0	0	1	1
0	1	0	0	1	1
0	1	1	0	0	1
0	1	1	0	0	1
0	1	1	1	0	1
1	0	0	1	1	0
1	0	0	0	1	0
1	0	0	0	0	0
1	0	1	0	0	0
1	1	0	0	0	0
1	1	0	1	0	0
1	1	1	0	0	0
1	1	1	0	1	0
1	1	1	1	0	0
1	1	1	1	1	0