

Question 1: Which expression corresponds to the given truth table?

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

Correct Answer:

The correct expression is: ('A and not (B and C and D and E)',

'C:\\Users\\Lenovo\\OneDrive\\Desktop\\logicgates\\Truthtable\\truth_table_1.svg')

Truth Table for the Correct Expression:

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

Question 2: Which expression corresponds to the given truth table?

A	B	C	D	E	Q
0	0	0	0	0	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	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
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

Correct Answer:

The correct expression is: ('A and B and not (C or D or E)',

'C:\\Users\\Lenovo\\OneDrive\\Desktop\\logicgates\\Truthtable\\truth_table_2.svg')

Truth Table for the Correct Expression:

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

Question 3: Which expression corresponds to the given truth table?

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

Correct Answer:

The correct expression is: ('not A and (B or C or D or E)',

'C:\\Users\\Lenovo\\OneDrive\\Desktop\\logicgates\\Truthtable\\truth_table_3.svg')

Truth Table for the Correct Expression:

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