Quiz 3

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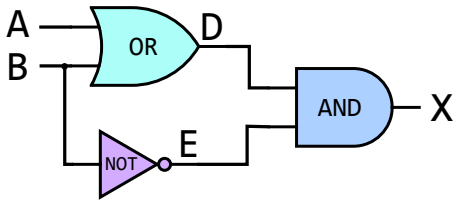
Solutions

Questions

1. Complete the truth table that corresponds to the following circuit. What would be the value of X in each row?



A	B	E=B′	D=A+B	X=D·E
0	0	1	0	0
0	1	0	1	0
1	0	1	1	1
1	1	0	1	0

2. For any Boolean values X and Y, can (X·Y)′ be rewritten as X′·Y′? yes/no

   Justify your answer by creating a truth table to show the results of the two expressions for all possible values of X and Y. As a reminder, the order of operations is that parentheses precede NOT, which precedes AND.

   No, they are not the same. Compare the columns labeled with ⋆ below.

			⋆			⋆
X	Y	X·Y	(X·Y)′	X′	Y′	X′·Y′
0	0	0	1	1	1	1
0	1	0	1	1	0	0
1	0	0	1	0	1	0
1	1	1	0	0	0	0