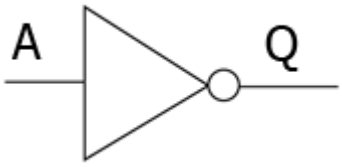
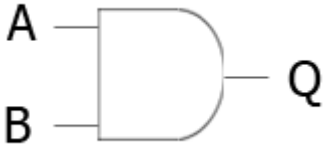
Logic Gates and Circuits

Question 1
The diagram below is for a NOT gate (or an Inverter) . Complete the truth table for this gate.



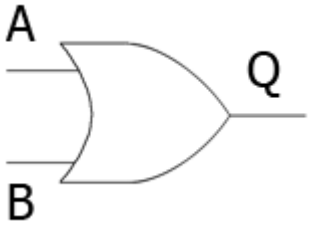
Input	Output
A	**Q**

Question 2
The diagram below is for an AND gate. Complete the truth table for this gate



Inputs		Output
A	**B**	**Q**

Question 3
The diagram below is for an OR gate. Complete the truth table for this gate.



Inputs		Output
A	**B**	**Q**

Logic Circuits – A Combination of Logic Gates

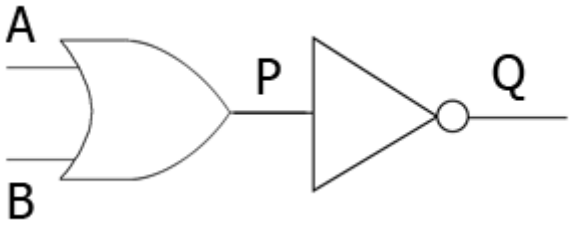
Question 4
Complete this table to show every possible combination of logic 2 inputs for A and B

A	B

Question 5
Complete this table to show every possible combination of logic 3 inputs A, B and C

A	B	C

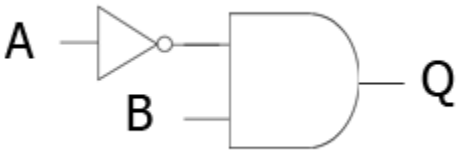
Question 6.



a) Complete the truth table for point P

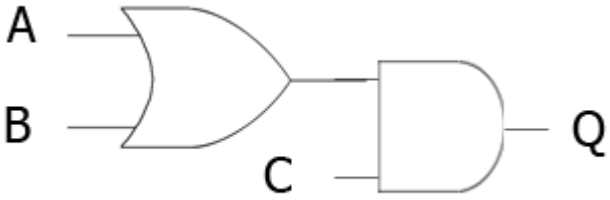
Inputs		Outputs	
A	**B**	**P**	**Q**

Question 7
Complete the truth table for this circuit.



Inputs		Outputs	
A	**B**		

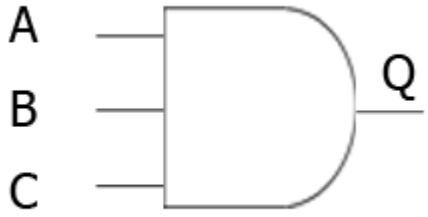
Question 8
The logic circuit below has 3 inputs and so there are 8 possible combinations of A, B and C.



Now work out every value of Q for the circuit

Inputs			Outputs	
A	**B**	**C**	**A OR B**	**Q**

Question 9
You can have more than two inputs to a logic gate.



Using the diagram above, complete the truth table below for the three input AND gate.

Inputs			Output
A	**B**	**C**	**Q**
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	