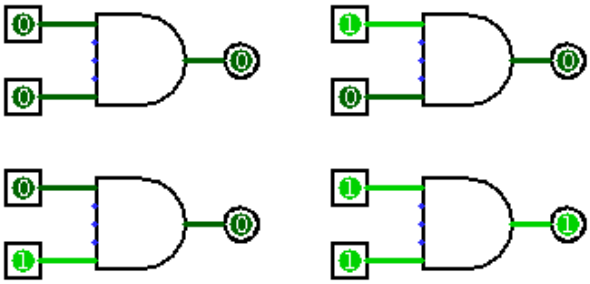
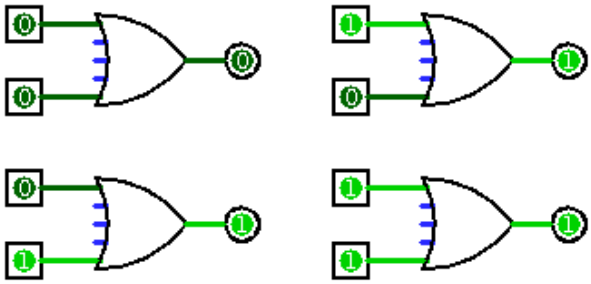
Model 1 Logic Gates

Complete the following tables based on the diagrams.



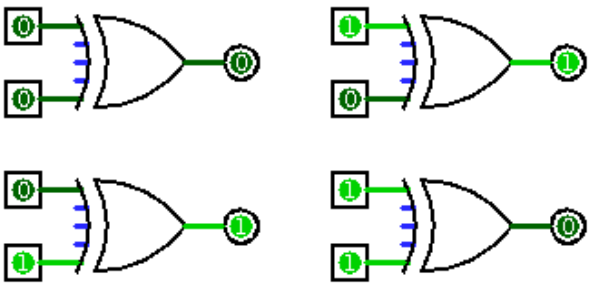
AND

Inputs	Output
0 0	
0 1	
1 0	
1 1	



OR

Inputs	Output
0 0	
0 1	
1 0	
1 1	



XOR

Inputs	Output
0 0	
0 1	
1 0	
1 1	

NOT

Input	Output
0	
1	

Questions (10 min) **Start time:** _____

1. In the circuit diagrams, what does the color (brightness) of the the lines represent?

2. For each type of gate, describe the circumstances when it will output the value 1.

AND:

OR:

XOR:

NOT:

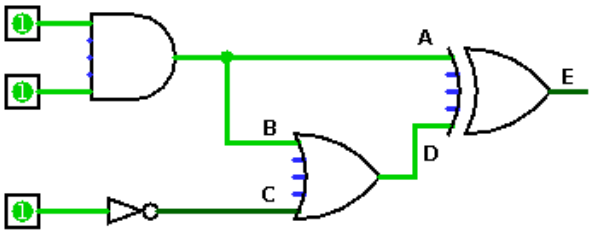
3. As a team, define the following words as they are used in everyday English.

logic:

gate:

4. Based on your definitions, what do you think a "logic gate" represents?

5. In the example circuit below, what are the values of *A*, *B*, *C*, *D*, and *E*?



6. How would *A*, *B*, *C*, *D*, and/or *E* change if the top input were zero?