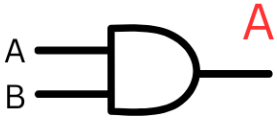
Name: Date: Class:

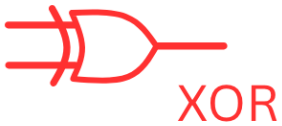
Logic Gates I Worksheet Answer Key



Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

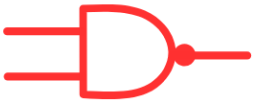
Group Example



Create an XOR gate and then draft its truth table.

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

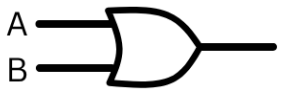
Group Example



Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0

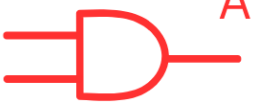
Group Example



Label the gate and then draft a truth table for its outcomes.

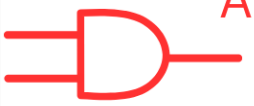
OR

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	1



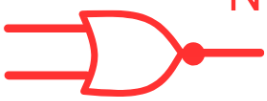
Create an AND gate and then draft its truth table.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1



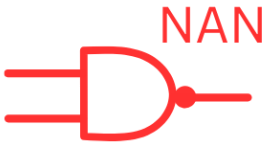
Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1



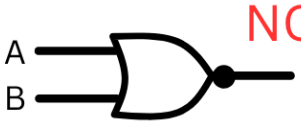
Create an NOR gate and then draft its truth table.

A	B	Output
0	0	1
0	1	0
1	0	0
1	1	0



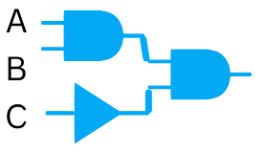
Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0



Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	1
0	1	0
1	0	0
1	1	0



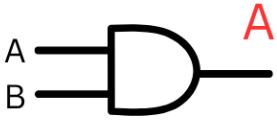
Challenge Problem!

Create a truth table for this series of Logic Gates.

Refer to Logic Gates II for the truth table!

Name: Date: Class:

AND

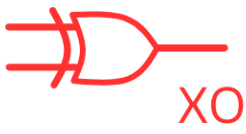


Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

Group Example

XOR

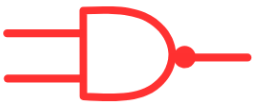


Create an XOR gate and then draft its truth table.

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

Group Example

NAND

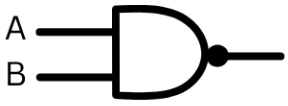


Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0

Group Example

NAND



Label the gate and then draft a truth table for its outcomes.

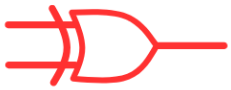
A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0

OR

Create an OR gate and then draft its truth table.

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	1

XNOR



Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	1
0	1	0
1	0	0
1	1	1

NOR

A	B	Output
0	0	1
0	1	0
1	0	0
1	1	0

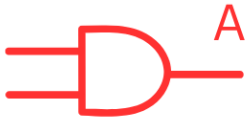
Label the gate and then draft a truth table for its outcomes.

OR

Look at the truth table. Draw a logic gate that represents it.

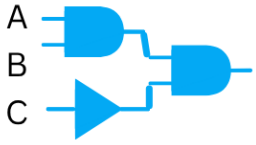
A	B	Output
0	0	0
0	1	1
1	0	1
1	1	1

AND



Create an AND gate and then draft its truth table.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1



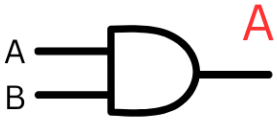
Challenge Problem!

Create a truth table for this series of Logic Gates.

Refer to Logic Gates II for the truth table!

Name: Date: Class:

AND



Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

Group Example

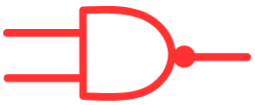
XOR

Create an XOR gate and then draft its truth table.

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

Group Example

NAND

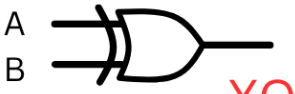


Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0

Group Example

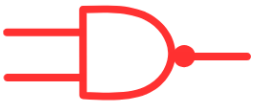
XOR



Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

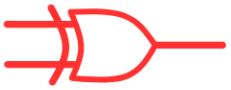
NAND



Create an NAND gate and then draft its truth table.

A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0

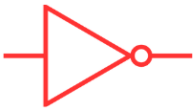
XNOR



Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	1
0	1	0
1	0	0
1	1	1

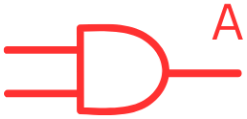
NOT



Create an NOT gate and then draft its truth table.

Input	Output
0	1
1	0

AND



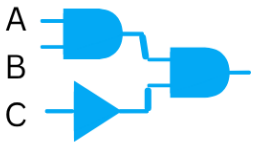
Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

NOR

Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	1
0	1	0
1	0	0
1	1	0



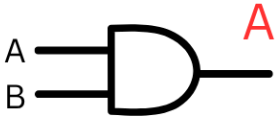
Challenge Problem!

Create a truth table for this series of Logic Gates.

Refer to Logic Gates II for the truth table!

Name: Date: Class:

AND

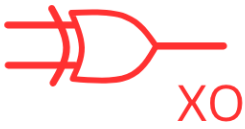


Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

Group Example

XOR

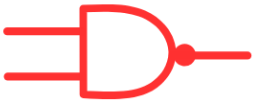


Create an XOR gate and then draft its truth table.

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

Group Example

NAND

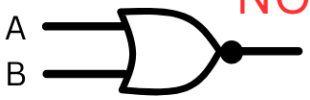


Look at the truth table. Draw a logic gate that represents it.

A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0

Group Example

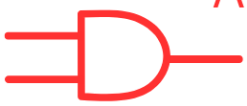
NOR



Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	1
0	1	0
1	0	0
1	1	0

AND



Create an AND gate and then draft its truth table.

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

NOR

Look at the truth table. Draw a logic gate that represents it.

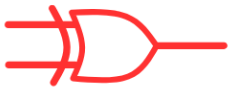
A	B	Output
0	0	1
0	1	0
1	0	0
1	1	0

OR

Create an NOR gate and then draft its truth table.

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	1

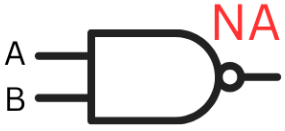
XNOR



Look at the truth table. Draw a logic gate that represents it.

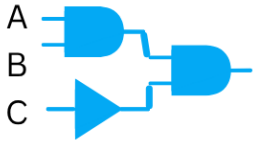
A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

NAND



Label the gate and then draft a truth table for its outcomes.

A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0



Challenge Problem!

Create a truth table for this series of Logic Gates.

Refer to Logic Gates II for the truth table!