

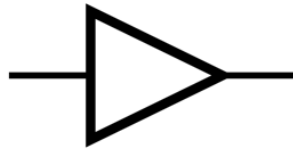
# Logic Gates

Empower  
Digital Week



## BUFFER

*"Output = Input"*



Input	Output
0	0
1	1

## NOT

*"Inverter"*



*"Opposite circle"*

Input	Output
0	1
1	0

## AND

*"This and that"*



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

## OR

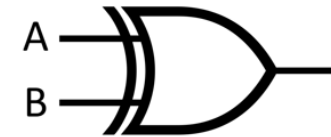
*"This or that"*



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

## XOR

*"This or that. Not both!"*



*(aka EXOR/  
"Exclusive OR")*

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

## NAND

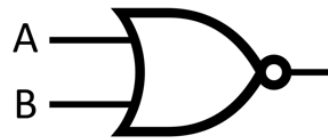
*"NOT-AND"*



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

## NOR

*"NOT-OR"*



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

## XNOR

*"Exclusive NOT-OR"*



*(The inverse of  
an XOR gate)*

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