

# Digital Logic



## Day 2


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[uarch.space/slides/day2.pdf](https://uarch.space/slides/day2.pdf)













now you try

# XOR GATE

A XOR gate has two inputs  and one output . It only on if the inputs are different.


Click the  icon to place components down.

Click the play  button to run the tests. If your circuit is correct, it should pass 4/4 tests.













A	B	Y
		
		
		
		

*now you try*

# XNOR GATE

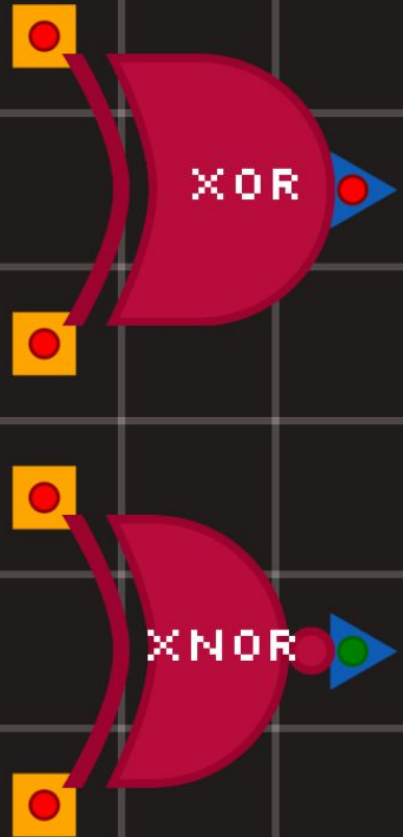
A XNOR gate has two inputs and one output . It is the inversion of the XOR gate, just like how NAND inverts AND and NOR inverts OR.



A	B	Y
		
		
		
		

# Challenge

- In the final level, you have 8 inputs. You should only output **ON** if an **ODD** number of inputs are on.
- For example, if only 1 input is **ON**, output **ON**, since 1 is odd. If 4 inputs are **ON** output **OFF**. The order of the inputs do not matter.



# Solutions:

[uarch.space/solutions/day2.pdf](https://uarch.space/solutions/day2.pdf)