

---

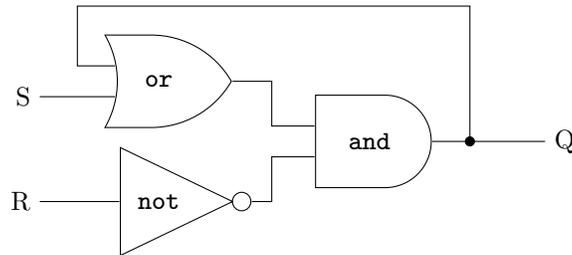
# Warm-Up: Flip-Flops

Prepared by Mark on January 23, 2025.

---

**Problem 1:**

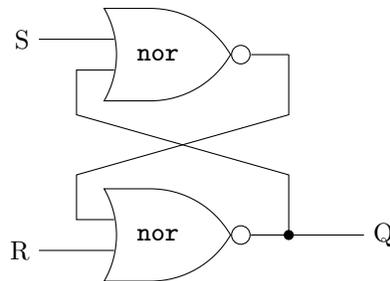
Below is a circuit of logic gates. S and R are input pins, Q is an output pin.  
What does it do?



**Problem 2:**

Below is another circuit. How does it work?

*Hint:* nor = not or. It works exactly as you'd expect.



**Problem 3:**

Empty circles represent inverted inputs/outputs. This is the reason a nand gate looks like an and gate with a dot. Pay careful attention to the nand gate in the bottom-left.

What does this circuit do?

