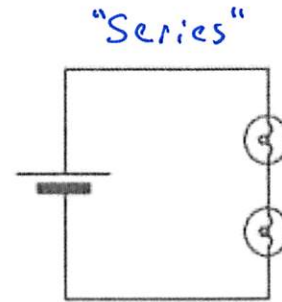


2. Lighting Two Bulbs

A. If you connect two bulbs to a battery in the way depicted at right, which will be brighter? in the way

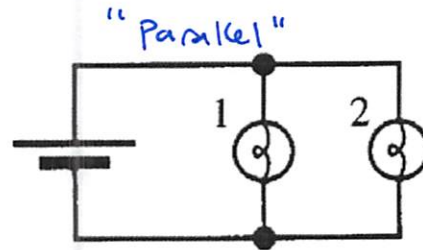
B. How can you determine that the bulbs themselves are "identical"?



3. More about current

Set up a two-bulb circuit with identical bulbs so that their terminals are connected together as shown.

Bulbs connected in this way are said to be connected in parallel.



A. Compare the brightness of the bulbs in this circuit.

1. What can you conclude from your observation about the amount of current through each bulb?
2. Describe the current through the entire circuit.

B. How does the brightness of each bulb in the two-bulb parallel circuit compare to that of a bulb in a single-bulb circuit? In particular, is each one half as bright?

How does the amount of current through a battery connected to a single bulb compare to the current through a battery connected to a two-bulb parallel circuit? Explain.

C. The circuit at right contains three identical bulbs. Don't set it up! Just *predict*:

- the relative brightness of the bulbs in the circuit
- how the brightness of bulb A would change if you unscrewed bulb C

Now check your predictions.

Explain why you *can't* predict how the brightness of bulb B would change if you unscrewed bulb C just by thinking about what happens to the current.

(If you think you can, go for it, but double-check with a TA.)

