Measure resistance in a circuit

Review

- What is resistance

  On board: $R = \frac{U}{I}$
- How to measure a stand alone resistor

  Use the definition. Practically, use a Ohm meter.

Resistor in a circuit

- Does that work for resistors in a circuit (and why).
  - Hint1: no
  - Hint2: what happens to the current

  On board: draw resistor in parallel with unknown.
- So how to measure it. (Give example circuit)

  On board: circuit diagram.
  - Method 1, (one resistor known, live circuit)
    - Can we know the voltage? **On board**: mark voltages
    - Can we know the current? **On board**: mark currents
    - What do we know about the current flow?
    - How can we calculate the current?
      - Hint: what values can we measure.
  - Method 2, (unknown resistor, offline circuit)
    - Treat like a blackbox.
    - What can we possibly measure.
    - What do we not want to deal with.
    - How do we "turn it off".
    - Now how to we calculate the resistances.