Take the case of rectangular wire and go over how resistance varies between different faces

1. **Series and Parallel Resistance**

   Derive the effective resistance when two resistors are connected in series and in parallel.

2. **Make resistors**

   Using only 1Ω resistors, synthesize a resistor of 3/5Ω and a resistor of 5/3Ω. Use no more than four 1Ω resistors in each case.
3. **What's the configuration?**

You are given a black box with three terminals, as shown below. The box is known to contain five 1Ω resistors. Using an ohm-meter, you measure the resistance between the terminals to be the following:

- A-B: 1.5Ω
- B-C: 3Ω
- A-C: 2.5Ω

Determine the configuration of the five resistors inside the box.