

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 $3/5\Omega$ and a resistor of $5/3\Omega$. Use no more than four 1Ω resistors in each case.

3. Whats 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.