

### Sample calculations for lab 03

**[a]** You have a  $10\ \Omega$  resistor in series with a  $100\ \Omega$  resistor. Sketch the circuit element. Calculate the equivalent resistance showing clearly the units at each step.

**[b]** You have a  $10\ \Omega$  resistor in parallel with a  $100\ \Omega$  resistor. Sketch the circuit element. Calculate the equivalent resistance showing clearly the units at each step.

**[c]** A  $50\ \Omega$  resistor is connected across a DC power supply that provides  $10\ \text{V}$  to the resistor. Thus, the potential drop across the resistor is  $10\text{V}$ . Calculate the current through the resistor showing clearly the units at each step.