In this video, you’ll learn how to use the virtual multimeter to measure voltage and current in a simple resistive circuit.

With the circuit constructed, we’re ready to take measurements. To connect the multimeter, click and drag the red lead terminal straight down to draw a new signal line. Once the new signal line is visible, drag it to the positive side of the 1 ohm resistor. Also connect the black lead.

With the multimeter connected, you’re ready to measure the voltage. With the model running, set the multimeter to measure DC voltage. Looks like this resistor is dropping about 5 volts.

Now let’s measure the current through the 5 Ohm resistor. To remove the leads, left click the signal, and press the delete key. To measure the current, you need break the circuit and connect the multimeter in series with the branch.

Now run the model and set the multimeter to measure DC current. Looks like there’s about 1.4 amps flowing through this branch.

You can also measure the equivalent resistance of all three resistors. To do so, you need to temporarily remove the voltage source. Right click the voltage source and select comment out. This temporarily removes the source from the simulation.

Now connect the multimeter leads to the ends of the resistor network. Run the model again and set the multimeter to measure resistance. The equivalent resistance of this network is 2.4 ohms.