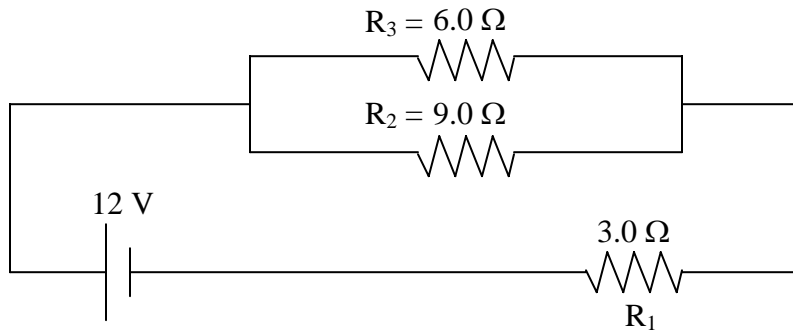
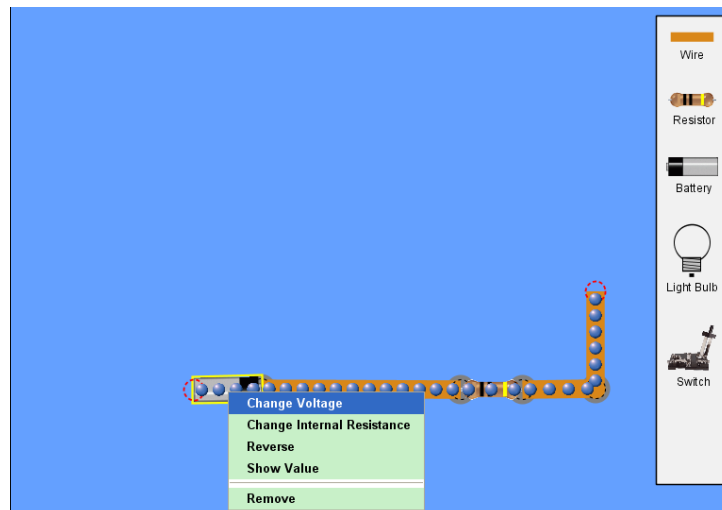


## Complex Circuit Exploratory

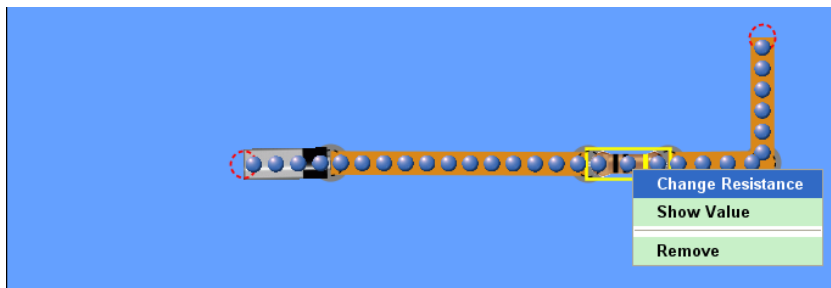
1. Go to <http://phet.colorado.edu/web-pages/index.html>.
2. Click on the “Play with sims...” button.
3. Click on the “Physics” link in the left frame of the page.
4. In the right frame, scroll down to find the “Circuit Construction Kit (DC Only),” and select it. You may select the “Run Now!” button.
5. Build the following circuit using the “Wire,” “Battery,” and “Resistors.” Remember that you can change the value of the resistors or the battery by right clicking on them.



### Changing Voltage:



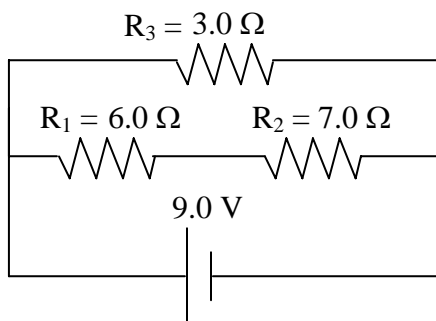
### Changing Resistance:



6. Measure the current and voltages across each resistor and the battery. Make a chart similar to the one below. Find the total resistance by using Ohm's law. If you have forgotten how to measure the voltage or current, refer back to the previous exploratories.

	Voltage	Current	Resistance
<b>Resistor 1</b>			
<b>Resistor 2</b>			
<b>Resistor 3</b>			
<b>Total</b>			

7. Build the following circuit using the wire, battery, and resistors.



8. Measure the voltage and current across each resistor and the battery. Make a table similar to the one you used in Step 6.

9. Summarize how voltage and current behave in complex circuits. There is not a simple pattern; you will need to draw small conclusions about series and parallel parts of the circuit separately.