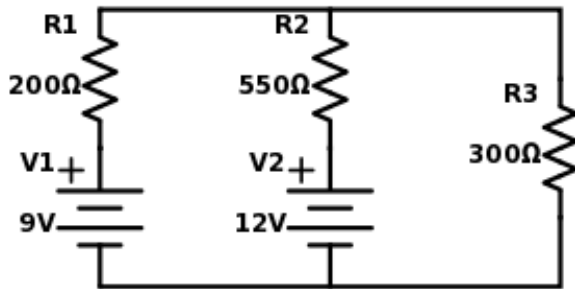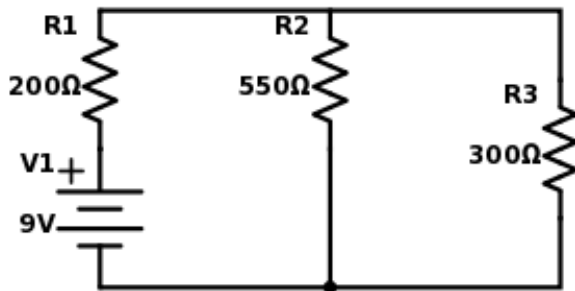# EN-3212 Electronics Worksheet 4

Superposition

Let's take a look at how we use the super position rule to determine how much current and what voltage drop we'll see in the resistors in the circuit shown below.


Select one of the voltage sources (V2), remove it from the circuit, and replace it with a conductor. Determine the currents (remember to find both magnitude and direction) through the resistors in the circuit below.

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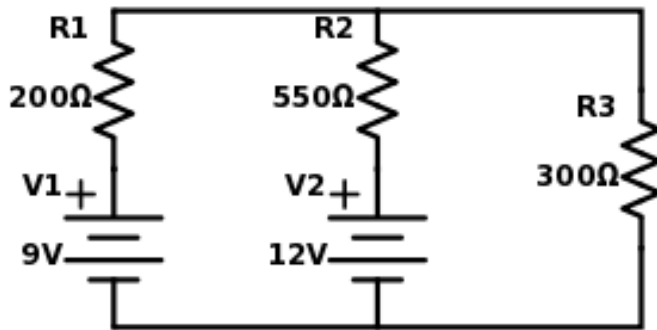
Superposition

Next, remove the OTHER voltage source from the original circuit and replace it with a conductor. As before, determine the currents (remember to find both magnitude and direction) through the resistors in the circuit below.
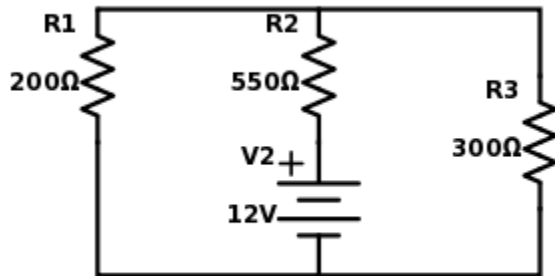
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Superposition

Look at the currents calculated for the last two circuits. If currents go the same way through a resistor, add the currents together. If the currents go in opposite directions, subtract the current values from one another. The current will flow in the direction of the larger of the two currents. Draw the resulting currents into the diagram below.
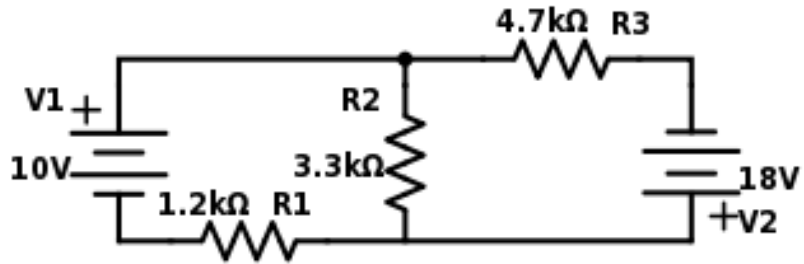

Finally, we can use Ohm's law to determine the voltage drop across each resistor.

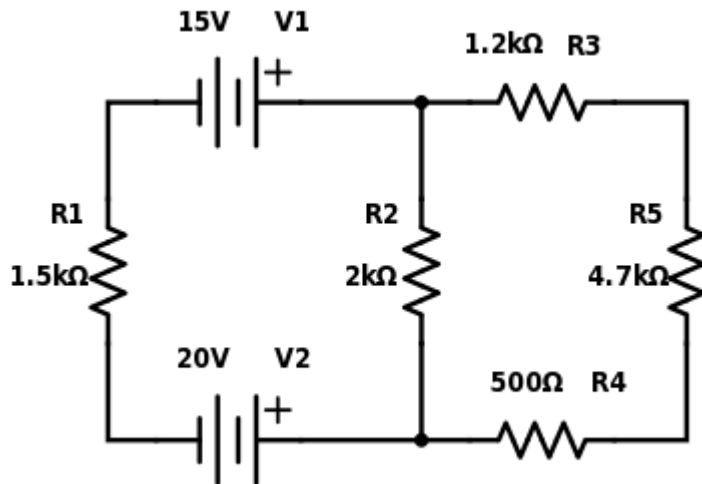# EN-3212 Electronics Worksheet 4

Superposition

Try an example:

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Superposition

Find the current through AND the voltage drop across EVERY resistor.

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Superposition

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Superposition

Find the current through AND the voltage drop across EVERY resistor.