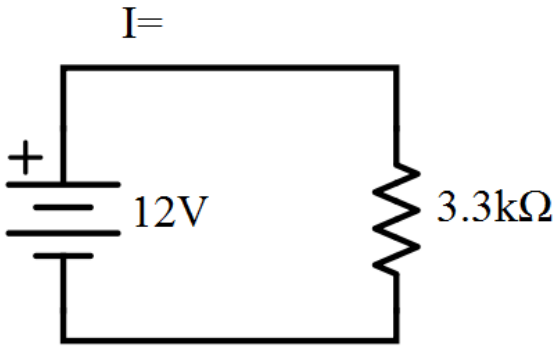
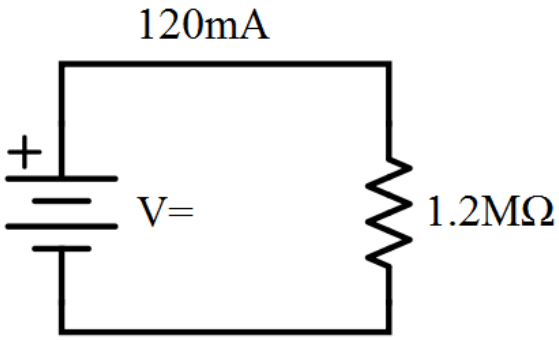
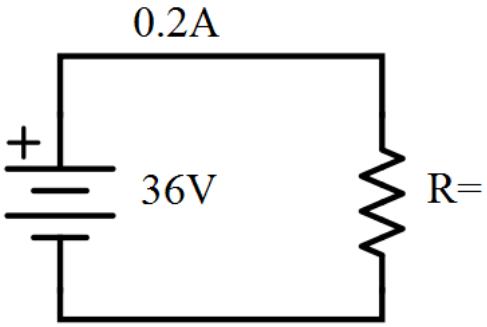
EN-3212 Electronics Worksheet 2

Basic Circuit Analysis

Find the missing value for each of the following circuits using Ohm's law. Calculate the power output for each resistor. Always show all of your work!







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Basic Circuit Analysis

The resistors in the following circuit are in (series / parallel).

That means that the (current through / voltage drop across) each element is the same.

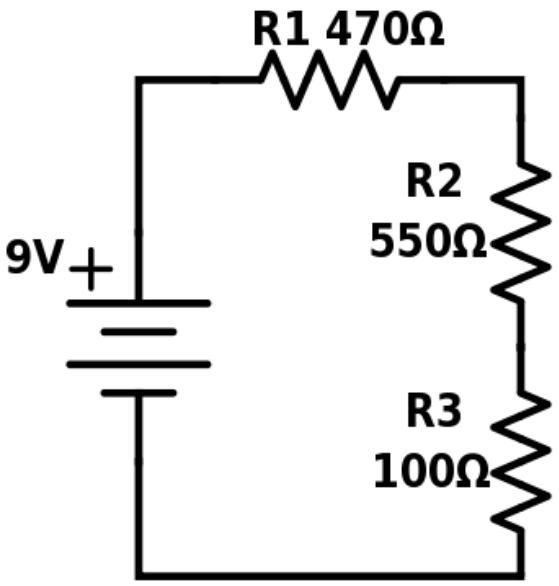
Calculate the equivalent resistance of the resistive elements in the circuit.

Use Ohm's law to calculate the current going through each element.

Use Ohm's law to calculate the voltage drop across each element.

Use the voltage divider rule to calculate the voltage drop across each element.

Calculate the power output by each resistor.



EN-3212 Electronics Worksheet 2

Basic Circuit Analysis

The resistors in the following circuit are in (series / parallel).

That means that the (current through / voltage drop across) each element is the same.

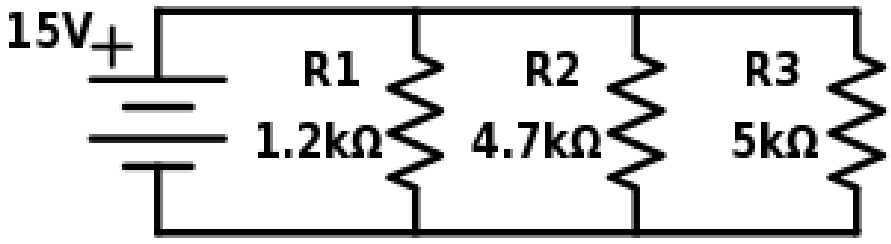
Calculate the equivalent resistance of the resistive elements in the circuit.

Use Ohm's law to calculate the current going through each element.

Use Ohm's law to calculate the voltage drop across each element.

Use the current divider rule to calculate the voltage drop across each element.

Calculate the power output by each resistor.



EN-3212 Electronics Worksheet 2

Basic Circuit Analysis

In the circuit diagram below, which resistors pairs are in series, which resistors pairs are in parallel, and which resistor pairs are neither in series nor in parallel?

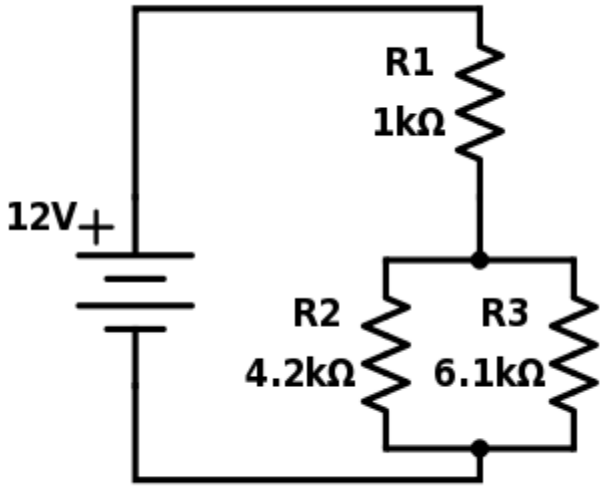
Which resistors must be lumped together first? Why?

Find the total resistance of the circuit.

Find the total current going through the circuit.

Use the voltage divider rule to find the voltage drops across the resistors.

Use the current divider rule to find the current through R2 and R3.



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Basic Circuit Analysis

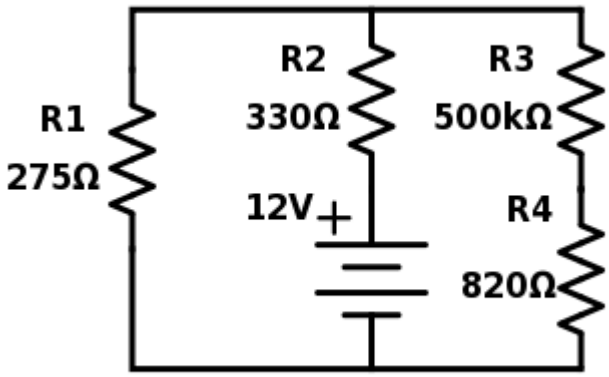
In the circuit diagram below, which resistors pairs are in series, which resistors pairs are in parallel, and which resistor pairs are neither in series nor in parallel?

Which resistors must be lumped together first? Why?

Find the total resistance of the circuit.

Find the total current going through the circuit.

Use any method to find the voltage drop across AND the current through EVERY resistor in circuit shown below.



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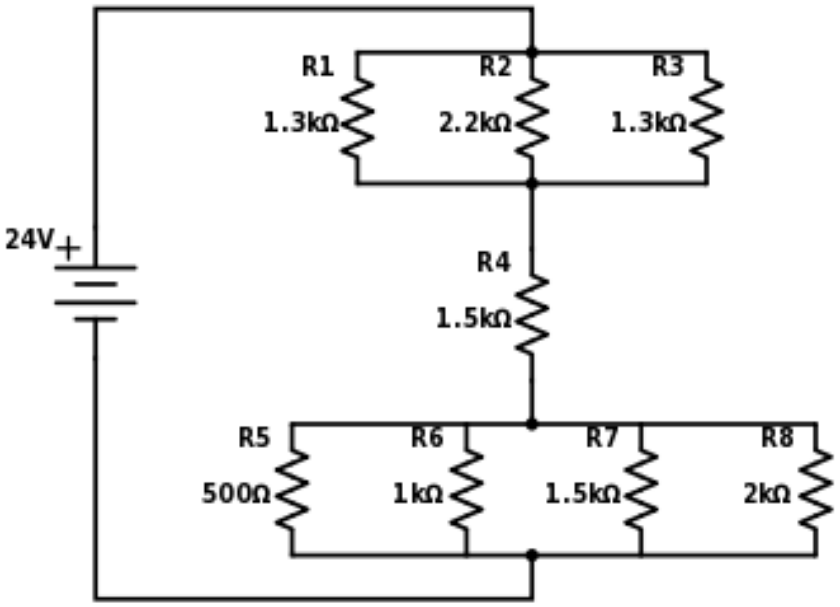
Basic Circuit Analysis

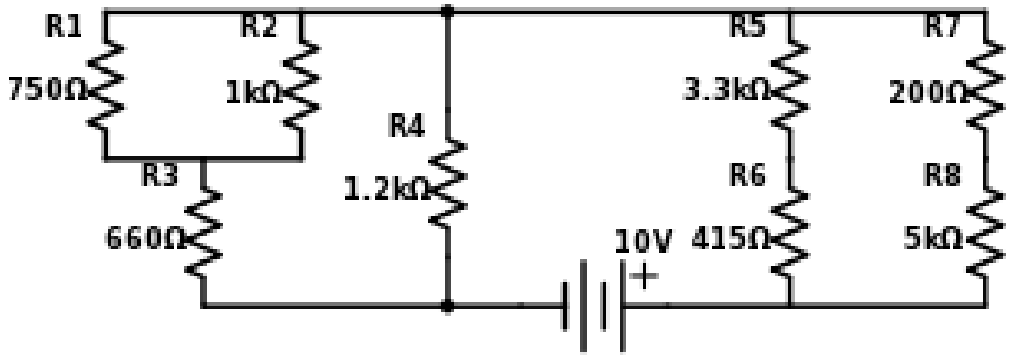
Use any method to find the voltage drop across AND the current through EVERY resistor in circuit shown below.



EN-3212 Electronics Worksheet 2

Basic Circuit Analysis

Use any method to find the voltage drop across AND the current through EVERY resistor in circuit shown below.



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Basic Circuit Analysis

For the circuit shown below, find Va and Vb. Calculate the difference (Va-Vb).