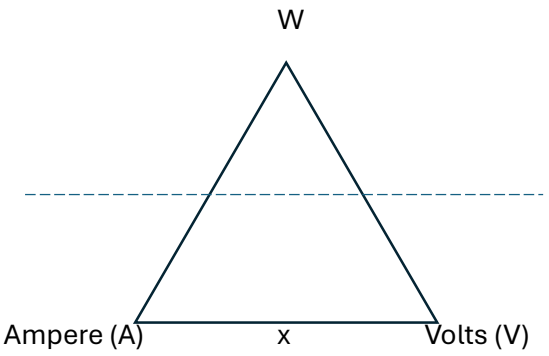
Electrical Units (Amperes, Watts and Volts)

Volts measure the force pushing electric charges through a circuit.

Watts measure the rate at which energy is used or produced.

Amperes measure the electric current, the flow of electric charge through a circuit per second.

A = W / V



Sometimes it's also written like: A = (1,000 x kW) / V. This format is just converting kilowatts back to watts.

Sample Questions:

A toaster oven operates at 120V and draws 10A of current. How many watts of power does it consume?

10A = ___ watts / 120 Volts. **1,200 Watts**

A light bulb consumes 60W of power and is connected to a 120V power source. How much current does it draw?

____ A = 60W / 120V. **0.5 Amperes**

A heater consumes 1.5kW of power and draws 12.5A of current. What is the voltage supply?

12.5A = 1,500 W / _____ Volts. = 1,500 /12.5 = **120 Volts.**