Skills Exploration
Watt's Law Assignment
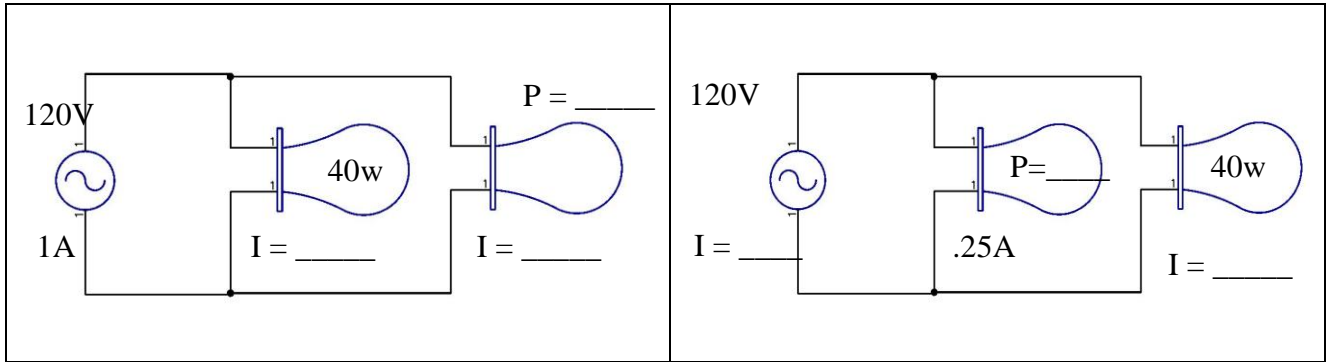
Name:_____   **Mark**   **/24**

Calculate the missing **values** for voltage, current or Watts using Watt's Law (P = V x I)

120v M P = _____ 2A	120V M 120W I = _____
V=_____ P = 100W 5A	120V P=60W I = _____
1.5A 120V P = _____	120V 60W 120W I = _____
120V 30W 30W I = _____	2A 120W 120V 3A P = _____ 1A

Circuit diagram: Left box — 120V AC source labeled 1A, with a 40w bulb labeled I = _____, and a second bulb labeled P = _____, I = _____. Right box — 120V AC source labeled I = _____, with a bulb labeled P= _____ and .25A, and a 40w bulb labeled I = _____.

Answer the following Power/Current questions about the different loads in the room. The **Voltage** in the room is **120V**

1) What is the maximum current in amps of the Green Mitre Saw?

2) What is the maximum current in amps of the Black Table Saw?

3) What is the maximum wattage of the microwave. How much current is it drawing?

4) What wattage is the heat gun? How many heat guns could be on a circuit before they trip a 15amp?

5) What is the maximum output of a laptop power supply in Watts and amps?

6) The florescent lights in the room are 30watts each. When all the lights are on, what is the total wattage of them all and what is the total current being used?