

Name: _____

SNC1D

Electricity Problems

Recall the equations that we have learned:

Resistance $R = V/I$

Power

$P = I \times V$

I – Current (A) R – Resistance (W - Ohms) V – Voltage - Potential Difference (V) P – Power (w)

Questions.

1. What is the resistance of a heating coil of an electric heater, if a current of 24A runs through it when plugged into a wall socket (120V)?
2. What is the potential difference across a light bulb that has a resistance of 30W when the current passing through it is 5.0A?
3. What is the power of a toaster if 40V of potential is lost in a 5A circuit?
4. A current of 25A passes through an electric heater when connected to a 100V wall outlet. What is the power of the heater?
5. What current passes through a 100W light bulb connected to the 120V electrical service of your house?
6. What is the resistance provided by a 3900W hairdryer connected to a wall outlet if the potential difference across it is 30V?