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PP D– Resistance P. 615

1. A 1.5 V battery is connected to a small light bulb with a resistance of 3.5 Ω. What is the current in the bulb?
2. A stereo with a resistance of 65 Ω is connected across a potential difference of 120 V. What is the current in this device?

1. Find the current in the following devices when they are connected across a potential difference of 120V.
2. a hot plate with a resistance of 48 Ω
3. a microwave oven with a resistance of 20 Ω
4. The current in a microwave oven is 6.25 A. If the resistance of the oven’s circuitry is 17.6 Ω, what is the potential difference of 115 V?
5. A typical color television draws 2.5 A of current when connected across a potential difference of 115 V. What is the effective resistance of the television set?
6. The current in a certain resistor is 0.50 A when it is connected to a potential difference of 110 V. What is the current in this same resistor if
7. The operating potential difference is 90.0 V
8. The operating potential difference is 130 V

1. What would the current in the heater in Problem 4 be if the wire developed a short and the resistance was reduced by 0.100 Ω?