

Name_____ Date_____

Section 10.3 Resisting the Movement of Charge

1) As the tunnel becomes more narrow, the resistance of motion becomes _____. Only a _____ current of people can move through the tunnel.

2) What do the atoms of the filament resist?

3) What is resistance?

4) What has a greater resistance, tungsten or copper?

5) If you wanted to make a bright light bulb, which kind of wire would you use? Explain.

6) How is pushing a box across a room like electrical resistance?

7) What is the formula for electrical resistance?

8) Whom is the ohm named after?

9) What is the symbol for the ohm?

10) What is the resistance of a heating coil of an electric heater, if a current of 12.5A runs through it, with a potential difference of 220V? Show all your work.

11) How can resistors be used in circuits?

12) What are 3 characteristics of a wire that affect its electrical resistance? Include a short explanation for each.

13) A light bulb passes a current of 0.83A when the potential difference across the bulb is 120V. What is the electrical resistance of the bulb in ohms?

14) What is the potential difference across an electric water heater element that has a resistance of 32 ohms when the current through it is 6.8 A?