

Name _____ Date _____ (9-3)

SHOCKING SOLUTIONS

Math Problems Involving Electricity

1. Brad has a new flashlight that runs on one 8-volt battery. How much current flows through this circuit if the bulb has 2 ohms of resistance?
2. If your fingers are damp and offer a resistance of only 1200 ohms, how much current will pass through them if you touch the terminals of a 6-volt battery?
3. If your hair dryer draws 10 amps of current on a 120-volt circuit, how much power does it use?
4. Shane's 100-watt radio draws 7 amps of current on a 120-volt circuit. What is the resistance in the radio?
5. It is Lisa's night to clean up the kitchen, but she's anxious to get started on her physics homework. While loading the dishwasher, she calculates how many amps of current it uses on a 120-volt circuit. What did she find?
6. Audrey fell off her horse during riding lessons and got all her clothes dirty. How much energy does an 1800-watt washing machine use if it runs for 30 minutes? What about a 4000-watt clothes dryer that runs for 1 hour? If electricity costs \$0.06/kWh, how much did it cost Audrey to wash and dry her clothes?