CHAPTER 11 ◆ SKILLS CONTINUED

◆ INTERPRETING DATA

House circuits are usually wired so that a total of 15 amperes can be used at one time. If you use appliances that require more than 15 amperes at one time, the circuit will become overloaded. A fuse will burn out or a circuit breaker will "pop." Look at the combinations of appliances listed in the table below. Using Ohm's law, calculate which appliance will overload the circuit. (Ohm's law: voltage = current × resistance)

Appliance	Voltage	Resistance	Current	Circuit overloaded (yes/no)
1. radio light	110 volts	8 ohms 220 ohms	_____ amperes _____ ampere	
2. light light radio	110 volts	110 ohms 220 ohms 70 ohms	_____ ampere _____ ampere _____ amperes	
3. washing machine iron light	110 volts	11 ohms 8 ohms 55 ohms	_____ amperes _____ amperes _____ amperes	

Use Ohm's law to complete the following table.

	Voltage	Current	Resistance
1.	110 volts	11 amperes	_____ ohms
2.	220 volts	_____ amperes	55 ohms
3.	1,400 volts	_____ amperes	700 ohms
4.	_____ volts	2 amperes	55 ohms
5.	_____ volts	5 amperes	44 ohms
6.	_____ volts	10 amperes	8 ohms
7.	116 volts	8 amperes	_____ ohms
8.	25 volts	_____ amperes	10 ohms
9.	90 volts	6 amperes	_____ ohms
10.	15 volts	_____ amperes	3 ohms