Science 9
Ohms Law Worksheet

Answer the following questions on a separate sheet of paper.
Show all work and formulas.

V = IR

1. What is the voltage in a circuit that has a current of 2.4 A and a resistance of 4.0 Ω?

2. A circuit has a resistance of 12 Ω and draws a current of 6.0 A what is the potential difference in the circuit?

3. A walkman uses a current of 2.0 A and has an internal resistance of 3.0 Ω, how many 1.5V batteries are required?

4. A TV set uses a current of 12 A and has a resistance of 10 Ω, what is the potential difference?

5. A circuit has a potential difference of 20 V and has a resistance of 4.5 Ω, how much current will the circuit use?

6. A circuit has an internal resistance of 8.0 Ω and uses a potential difference of 12 V what is the current in the circuit?

7. A toaster has a resistance of 60 Ω and is plugged into a 120 V power supply, what is the current in the toaster?

8. A circuit has a potential difference of 20 V and draws a current 4.2 A what is the resistance in the circuit?

9. A circuit has a potential difference of 60 V and a current of 15 A, what is the resistance in the circuit?

10. A stove uses a power source of 240 V and draws a current of 5.0A what is the resistance in the stove?

11. A dryer has a resistance of 800 Ω and draws a current of 0.30 A what is the potential difference?

12. A radio has a power source of 6.0 V and operates with a current of 0.40 A what is the resistance in the circuit?