

# Section Review

---

## Changes of State

### USING KEY TERMS

For each pair of terms, explain how the meanings of the terms differ.

1. *melting and freezing*

---

---

2. *condensation and evaporation*

---

---

### UNDERSTANDING KEY IDEAS

- \_\_\_\_\_ 3. The change from a solid directly to a gas is called
- a. evaporation.
  - b. boiling.
  - c. melting.
  - d. sublimation.

4. Describe how the motion and arrangement of particles in a substance change as the substance freezes.

---

---

---

5. Explain what happens to the temperature of an ice cube as it melts.

---

---

---

6. How are evaporation and boiling different? How are they similar?

---

---

---

---

**MATH SKILLS**

7. The volume of a substance in the gaseous state is about 1,000 times the volume of the same substance in the liquid state. How much space would 18 mL of water take up if it evaporated? Show your work below.

**CRITICAL THINKING**

8. **Evaluating Data** The temperature of water in a beaker is 25°C. After adding a piece of magnesium to the water, the temperature increases to 28°C. Is this an exothermic or endothermic reaction? Explain your answer.

---

---

---

---

9. **Applying Concepts** Solid crystals of iodine were placed in a flask. The top of the flask was covered with aluminum foil. The flask was gently heated. Soon, the flask was filled with a reddish gas. What change of state took place? Explain your answer.

---

---

---

---

---

10. **Predicting Consequences** Would using dry ice in your holiday punch cause it to become watery after several hours? Why or why not?

---

---

---

---

---