Name _____ Date _____ Class _____

Review and Reinforce

States of Matter

Understanding Main Ideas

Answer the following questions in the space provided.

1. What are the general characteristics of a solid?

_____

2. How do crystalline solids differ from amorphous solids?

_____

3. How are liquids described in terms of shape and volume?

_____

4. Explain why a sewing needle can float on the surface of water in a glass.

_____

_____

5. What determines the shape and volume of a gas inside a container?

_____

Building Vocabulary

If the statement is true, write *true*. If the statement is false, change the underlined word or words to make the statement true.

6. _____ Rubber and glass, which become softer as they are heated, are examples of crystalline solids.

7. _____ When you see steam, fog, or clouds, you are seeing water in the liquid state.

8. _____ The volume of a gas is the force of its outward push divided by the area of the walls of the container.

9. _____ A(n) gas has a definite volume but no definite shape.

10. _____ A(n) fluid has a definite shape and volume.

Name _____ Date _____ Class _____

Review and Reinforce

Changes of State

Understanding Main Ideas

Fill in the blank to complete each statement.

1. Both sublimation and _____ occur only on the surface of a substance.
2. The _____ of melting is freezing.
3. When butter is heated it melts, and when that melted butter cools and solidifies the process is called _____.
4. When a gas turns to a liquid, the energy of the particles _____.
5. Vaporization is the reverse of _____.

Building Vocabulary

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

6. ___ melting	**a.** the change from a liquid to a gas
7. ___ freezing	**b.** the change from a solid to a liquid
8. ___ condensing	**c.** the change from a solid to a gas
9. ___ vaporizing	**d.** the change from a gas to a liquid
10. ___ subliming	**e.** the change from a liquid to a solid

Place the outside corner, the corner away from the dotted line, in the corner of your copy machine to copy onto letter-size paper.

Name _____ Date _____ Class _____

Review and Reinforce

Gas Behavior

Understanding Main Ideas

If the statement is true, write *true*. If the statement is false, change the underlined word or words to make the statement true.

1. _____ If the temperature of a gas is constant, when the pressure is increased, the volume decreases.
2. _____ If the air pressure inside an inner tube is constant, when the temperature of the air is increased, the volume decreases.
3. _____ The graph of the relationship between the volume of a gas at constant temperature and its pressure is a(n) line.
4. _____ If the temperature of a gas inside a sealed, rigid container is decreased, its pressure decreases.
5. _____ The graph for Charles's law shows that the volume of a gas at constant pressure is inversely proportional to its temperature.
6. _____ If a gas at constant pressure inside a cylinder topped by a movable piston is heated, the volume of the gas will increase and push the piston outward.

Building Vocabulary

Fill in the blank to complete each statement.

7. When the graph relating two variables is a straight line passing through the origin, the variables are _____ proportional.
8. According to _____ law, when the pressure of a gas at constant temperature is increased, the volume of the gas decreases.
9. According to _____ law, when the temperature of a gas is increased at constant pressure, its volume increases.
10. When the product of two variables is constant, the variables are _____ proportional to each other.

Place the outside corner, the corner away from the dotted line, in the corner of your copy machine to copy onto just paper.