

CHAPTER REVIEW**Chapter 7****Molecules in Motion****I. Vocabulary Review**

For each set of terms, circle the term that does not belong.

1. Charles, Boyle, volume, temperature
2. Charles, Boyle, volume, pressure
3. boiling, bubbles, crystals, vapor
4. liquid, gas, evaporation, sublimation
5. liquid, solid, syrup, viscosity
6. collisions, pressure, solid, gas
7. Kelvin, Celsius, temperature, pressure

II. Concept Review

If the underscored word or phrase makes the sentence true, write "TRUE" in the space provided. If the underscored word or phrase makes the sentence false, write the correct term or phrase in the space provided.

- _____ 8. Kinetic theory explains the thermal expansion of solids and liquids in the same way.
- _____ 9. Evaporation is the process in which a solid changes to a gas.
- _____ 10. Molecules in liquids have stronger attractive forces than do molecules in solids.
- _____ 11. A concrete sidewalk will expand on a hot summer day.
- _____ 12. The melting of butter occurs when its molecules release thermal energy.
- _____ 13. Carbon dioxide changes from a solid to a liquid at room temperature.
- _____ 14. When more molecules of nitrogen gas begin to collide in a given volume, the pressure begins to rise.
- _____ 15. An increase in the pressure of helium gas will cause an increase in volume.

Chapter Review 7 (continued)

Use Figure 1 to answer the following questions.

- 16.** Which area of the diagram has particles with the strongest bonds? _____
- 17.** Which area of the diagram represents a substance with a definite volume but not a definite shape? _____

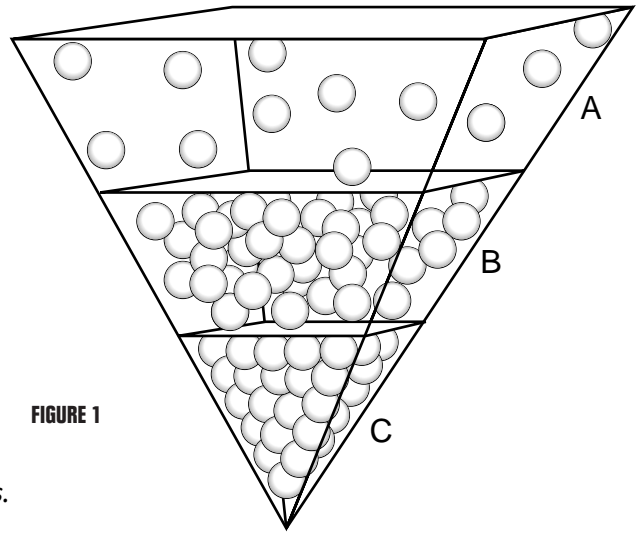


FIGURE 1

III. Skills/Process Review

Use the table below to answer the following questions.

The Volume of a Balloon as Temperature Changes			
State	Circumference	Volume	Temperature
Room	36 cm	780 cm ³	24°C
Cold	33 cm	609 cm ³	1°C
Hot	42 cm	1256 cm ³	98°C

- _____ **18.** The volume of the balloon _____ when the temperature increases from 1°C to 98°C.
- a.** decreases by about one-half **c.** increases by more than 2 times
- b.** increases by 171 cm³ **d.** decreases by 171 cm³
- _____ **19.** The volume of the balloon _____ when the temperature decreases from 24°C to 1°C.
- a.** decreases by about one-half **c.** increases by more than 2 times
- b.** increases by 171 cm³ **d.** decreases by 171 cm³
- _____ **20.** If the circumference of the balloon were 40 cm, the temperature would be _____.
- a.** more than 100°C **c.** between 1°C and 24°C
- b.** between 24°C and 98°C **d.** below 0°C

IV. EYV Review

- 21. Science and Society: Keeping Your Cool** Summarize the benefits and the difficulties associated with the widespread use of air conditioning. _____
