

CHAPTER REVIEW**Chapter 14****Gases, Atoms, and Molecules****I. Vocabulary Review**

In the blank, write the word or words that best complete the sentence.

1. A measure of the average kinetic energy of moving gas particles is _____.
2. Gas moves from one area to another by _____.
3. Water is a(n) _____ of hydrogen and oxygen.
4. According to _____ law, as gas pressure increases, volume decreases if temperature is constant.
5. The increase in temperature causing carbon dioxide to expand in bread dough demonstrates _____.
6. The smallest particle of aluminum is a(n) _____.
7. Lowering the temperature of a gas in a closed container will _____ the pressure of the gas.
8. Balloons filled with helium in a cool room will _____ if taken outside in very hot weather.
9. The idea that matter is composed of small _____ called atoms is explained by the atomic theory of matter.
10. The law of definite proportions predicts that one liter of water and one milliliter of water have the same _____ of hydrogen and oxygen atoms.

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.

- _____ 11. The upward force on an aerostat is called its floating force.
- _____ 12. Dalton proposed that different compounds were composed of different atoms.
- _____ 13. The smallest particle of gold is a gold atom.
- _____ 14. SCUBA equipment provides air to the lungs at a volume that matches the underwater environment.
- _____ 15. Evidence for the smallest particle comes from chemical reactions.
- _____ 16. At room temperature, gas particles have energy and are motionless.

Chapter Review 14 (continued)

III. Skills/Process Review



Mass of 1 penny = 32.4 g
Mass of 1 nickel = 60.0 g

FIGURE 1

Use Figure 1 to answer the following questions.

- 17. What is the ratio of pennies to nickels? _____
- 18. What is the mass ratio of pennies to nickels? _____
- 19. Would the mass ratio of pennies to nickels change if you had 3 000 000 seven-cent combinations? Explain your answer. _____

IV. EYV Review

20. **History Connection: The Gas Laws** Summarize the scientific pursuits of Robert Boyle and Jacques Charles. _____

21. **Health Connection: Breathing Underwater** Summarize how a diver can get “the bends.” _____