Name _____ Date _____ Class _____

LESSON 1

# Proportional Relationships

## Problem Solving: Ratios and Rates

**Use the table to answer each question.**

**Atomic Particles of Elements**

| Element | Protons | Neutrons | Electrons |
|---|---|---|---|
| Gold | 79 | 118 | 79 |
| Iron | 26 | 30 | 26 |
| Neon | 10 | 10 | 10 |
| Platinum | 78 | 117 | 78 |
| Silver | 47 | 61 | 47 |
| Tin | 50 | 69 | 50 |

1. What is the ratio of gold protons to silver protons?

2. What is the ratio of gold neutrons to platinum protons?

3. What are two equivalent ratios of neon protons to tin protons?

4. What are two equivalent ratios of iron protons to iron neutrons?

**Circle the letter of the correct answer.**

5. A ratio of one element's neutrons to another element's electrons is equivalent to 3 to 5. What are those two elements?

   A iron neutrons to tin electrons

   B gold neutrons to tin electrons

   C tin neutrons to gold electrons

   D neon neutrons to iron electrons

6. The ratio of two elements' protons is equivalent to 3 to 1. What are those two elements?

   F gold to tin

   G neon to tin

   H platinum to iron

   J silver to gold

7. Which element in the table has a ratio of 1 to 1, no matter what parts you are comparing in the ratio?

   A iron

   B neon

   C tin

   D silver

8. If the ratio for any element is 1:1, which two parts is the ratio comparing?

   F protons to neutrons

   G electrons to neutrons

   H protons to electrons

   J neutrons to electrons

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