

Algebra

Ratio and Proportion Word Problems

On a separate sheet of paper solve the given word problem, using algebraic equations, showing proper steps.

1. The Shirley Temple drink is made with a ratio of eight parts of ginger ale to one part grenadine syrup. How much of each is needed to make a 12 ounce Shirley Temple?
2. The measures of the angles of a triangle are in the ratio of 1 : 2 : 3. Find the measure of each angle.
3. A U.S. one dollar coin is made of copper, zinc, manganese, and nickel in the following ratio: 44 : 3 : 2 : 1. Its mass is 8 grams. How many grams of each element are in a one dollar coin?
4. An 18 – Karat gold necklace weighs 24 grams: 18 grams of pure gold and six grams of metal alloy. The cost of the necklace is \$1200. There is a matching bracelet, weighing 10 grams.
 - a. What should be the cost of the bracelet?
 - b. How many grams of each, pure gold and metal alloy, should the bracelet contain?
5. A Toyota Prius drove 208 miles on 5 gallons of gas. How far should it be able to go on a full, 11 gallon, tank?
6. A six-pack of Coke costs \$2.09. At this rate, how much should 32 cans cost?
7. Kareem Abdul-Jabbar holds the NBA record for the most points scored in a career, 38,387. In the first 280 games of his career, LeBron James has scored 7446 points. At this rate, how many more games will LeBron James need to play to break Abdul-Jabbar's career record?
8. The Lakers have won 27 games and lost 17 games. At this rate, how many games should they win, in an 82 game season?
9. Tax on a \$25 item is \$2.06. What should be the tax on a \$45 item?
10. The results of a recent survey of 1500 American adults show that 525 approve of the job that President George W. Bush is doing and 975 do not approve.
 - a. What is the ratio of those that approve to those that do not?
 - b. If there are 199 million adults in the United States, how many approve of George W?
 - c. If a larger survey was done, showing 5000 people approving of George W, how many were surveyed?
11. The New Jersey Devils ratio of wins to loses to ties is: 6 : 3 : 1.
 - a. What is the ratio of wins to total games played?
 - b. What is the ratio of loses to total games played?
 - c. What is the ratio of ties to total games played?
 - d. If there have been 50 games played, how many have the Devils won, lost, and tied?
 - e. How many games should they win, lose, and tie in an 82 game season?