**Using Ratios and Proportions**

Use a separate piece of paper or the back of this page to set up and solve each proportion. Write the final answer in the blank. Be sure to include labels!

1. Find two numbers in a ratio of 4:5 whose sum is 45.
2. Together there are 180 players and coaches in the town soccer league. If the player-coach ratio is 9:1, how many players are there?
3. The perimeter of a rectangle is 96 cm. Find the dimensions of the rectangle if the ratio of the length to the width is 7:5.
4. The lengths of the three sides of a triangle are in the ratio 3:5:6. The perimeter of the triangle is 21 cm. Find the length of each side of the triangle.
5. Concrete can be made by mixing cement, sand, and gravel in the ratio of 3:6:8. How much gravel is needed to make 850 m3 of concrete?
6. In a survey of 700 voters, the ratio of men to women taking part was 17:18. How many women took part in the survey?
7. About 8 gallons of gas filled the tank after Greg drove 224 miles. How many miles can he expect to drive on a full tank of 13 gallons of gas?
8. Sara earns $10.20 for 3 hours of work. How much does she earn in 5 hours at the same rate of pay?
9. An ad claims that in a recent poll, three out of four dentists recommended brushing with a certain brand of toothpaste. If there were 92 dentists polled, how many favored this brand?
10. A consumer survey was taken in a town with 18,000 homes. Of the 360 homes surveyed, 48 did not have computers. On the basis of this survey, estimate the number of homes in the town that do not have computers.
11. A 25-acre field yields 550 bushels of wheat each year. How many more acres should be planted so that the yearly yield will be 660 bushels?
12. At a fixed interest rate, an investment of $4000 earns $210. How much do you need to invest at the same rate to earn $336?
13. On a map, 1 cm represents 10 km. On the same map, the state of Wyoming is a rectangle 44.5 cm by 59.1 cm. Find the **area** of Wyoming in km2.
14. The ratio of carbon to oxygen, by weight, in carbon dioxide is 3:8. How many grams of carbon are in 77 grams of carbon dioxide?