



Name _____

Date _____

Study Guide

Using Proportions

You can use proportions to solve problems.

Example Of the 360 members of the kennel club who were surveyed, 190 said they would try a new dog food. If the kennel club has 2,100 members, how many could be expected to try the new dog food?

Let t represent the number of members who might try the new dog food. Write a proportion.

$$\frac{190}{360} = \frac{t}{2,100}$$

← will try new dog food
← kennel club members

$$190 \cdot 2,100 = 360t \quad \text{Find the cross products.}$$

$$399,000 = 360t$$

$$\frac{399,000}{360} = \frac{360t}{360}$$

$$1,108 \approx t$$

About 1,108 members of the kennel club might be expected to try the new dog food.

Solve.

1. A shop produces 47 surfboards in 6 days. How long will it take them to make 423 surfboards?
2. Six bottles of mineral water cost \$2.29. How much will 84 bottles of mineral water cost?
3. A recipe for muffins calls for $1\frac{1}{2}$ cups of bran cereal. The recipe makes 12 muffins. How much bran cereal is needed to make 96 muffins?
4. Five out of every 8 people surveyed in Carson City approved of a new golf course. If there are 26,000 people in Carson City, about how many can be expected to approve of the golf course?
5. Ryan's heart beats 216 times in 3 minutes. How many times will it beat in an hour?
6. A sample of fish from a river showed that $\frac{2}{5}$ of the fish were less than one year old. If there are an estimated 8,000 fish in the river, about how many of them are less than one year old?
7. Maria drove her car 250 miles on 10 gallons of gasoline. About how many gallons of gasoline will she need for a 1,250-mile trip?