

## Review of Solving Proportions

A proportion is a statement of equality between two ratios. In other words, when one ratio is set equal to another, both ratios will simplify to the same fraction or decimal. We can convert the two fractions so they have common numerators or denominators or we can use cross products to find the missing value in a proportion.

A. 
$$\frac{12}{15} = \frac{b}{20}$$

$$\frac{16}{34} = \frac{b}{51}$$

B. The ratio of sparrows to blue jays in the yard was 5 to 3. If there were 15 blue jays in the yard, how many sparrows were there?

C. 
$$\frac{4}{6} = \frac{b}{12}$$

$$\frac{4}{6} = \frac{b}{9}$$

$$\frac{6}{18} = \frac{b}{9}$$

$$\frac{12}{3} = \frac{b}{2}$$

1. Hector has a floor plan showing his new house. On the floor plan, his bedroom is 3 inches wide and  $3\frac{1}{2}$  inches long. The scale of the floor plan is  $\frac{1}{4}$  inch = 1 foot. What is the actual length of Hector's room?

2. Jonah built a model train car. The length of the model train car is 6 inches. The scale Jonah used to build the model train car is 1:36. What is the actual length of the train car in FEET?

3. A jar contains 144 pennies. The pennies are taken out and divided into two piles. If the larger pile contains twice as many pennies as the smaller one, how many pennies are in the larger pile?
4. Tate is on a 2100 mile trip across the country. Over the last 12 hours of driving, Tate has traveled 720 miles. If he continues traveling at the same rate, how many more hours will it take him to complete his trip?
5. Jim found out that after working for 9 months, he has earned 6 days of vacation. How many days will he have earned after working for two years?
6. Sam works as a dental hygienist. Last week Sam made \$500 for 20 hours of work. How many hours must Sam work in order to make \$700?
7. In a shipment of 400 parts, 14 are found to be defective. How many defective parts should be expected in a shipment of 1000 parts?