

Proportions are used to compare two ratios or make equivalent fractions. To solve for an unknown number in a proportion, you must cross-multiply the numerator of one ratio with the denominator of the other ratio (the two numbers that are diagonal from each other), and then divide your answer by the third number.

Select the best answer for the following questions and type it on the line provided.

1. Is this a true proportion?  $\frac{5}{10} = \frac{8}{16}$  \_\_\_\_\_

- a. yes
- b. no

2. Solve for x in the following problem.  $\frac{12}{6} = \frac{x}{4}$  \_\_\_\_\_

- a. 6
- b. 8
- c. 10
- d. 12

3. Solve for x in the following problem.  $\frac{45}{x} = \frac{9}{2}$  \_\_\_\_\_

- a. 10
- b. 15
- c. 20
- d. 30

4. The ratio of a father's age to his son's age is 6 to 2. If the son is 12 years old, how old is his father?  
\_\_\_\_\_

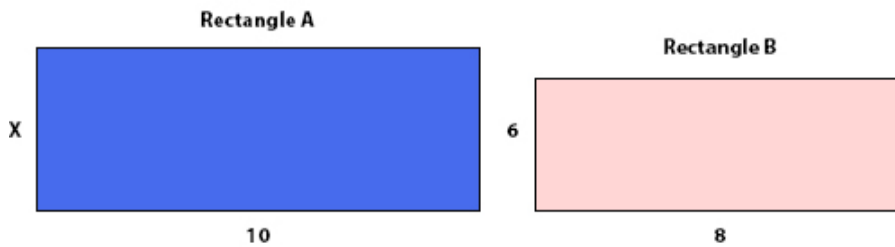
- a. 24
- b. 36
- c. 42
- d. 48

5. Three out of every five computers has a glitch in the system. Jared's Electronics just received a shipment of 250 computers. How many computers will have to be sent back? \_\_\_\_\_

- a. 100
- b. 125
- c. 150
- d. 200

6. Larry worked 35 hours in one week and earned \$280. If he only works 20 hours the next week, how much can he expect his paycheck to be? \_\_\_\_\_
- a. 150
  - b. 160
  - c. 180
  - d. 200

7. These rectangles are similar. Find the length of side  $x$ . \_\_\_\_\_



- a. 5
  - b. 7.25
  - c. 7.5
  - d. 8
8. A bag of tortillas indicates that two servings equal 150 calories. How many calories are in three servings of the same bag of tortilla chips? \_\_\_\_\_
- a. 200
  - b. 225
  - c. 250
  - d. 300
9. To make 20 cupcakes, Jaime uses 5 cups of flour,  $1\frac{1}{2}$  cup of milk, 1 cup of sugar, and 1 egg. If she increases the recipe to use 3 cups of milk, how many cups of flour will she use? \_\_\_\_\_
- a. 5
  - b. 10
  - c. 13
  - d. 15
10. When 2,000 pounds of paper are recycled or reused, 15 trees are saved. How many trees are saved if 5,000 pounds of paper is recycled? \_\_\_\_\_
- a. 31.5
  - b. 37.5
  - c. 39.5
  - d. 41.5