Name _____ Date _____

3.5 Practice

Use Cross Products to solve the proportion.

1. $\frac{7}{4} = \frac{y}{28}$

2. $\frac{d}{48} = \frac{3}{4}$

3. $\frac{j}{8} = \frac{35}{56}$

4. $\frac{14}{21} = \frac{b}{9}$

5. $\frac{10}{p} = \frac{6}{9}$

6. $\frac{55}{4} = \frac{h}{6}$

7. Eighteen oranges are packaged in 3 containers. How many oranges are packaged in 7 containers?

8. It costs $270 for 3 people to go on a fishing trip. How much does it cost for 10 people to go on the fishing trip?

Solve the proportion.

9. $\frac{3x}{10} = \frac{9}{4}$

10. $\frac{5x}{3} = \frac{80}{12}$

11. $\frac{7}{2} = \frac{x+1}{6}$

12. $\frac{c-3}{6} = \frac{7}{3}$

13. Tell whether the statement is *true* or *false*. Explain.

If $\frac{p}{q} = \frac{3}{5}$, then $\frac{5}{p} = \frac{3}{q}$.

14. The dimensions of a miniature model are proportional to the dimensions of the actual building.

A wall that is 12 feet high on the building is 36 centimeters high on the model. Find the height on the model of a door that is 9 feet high on the building.

15. The distance traveled (in feet) is proportional to the number of seconds. Find the values of x, y, and z.

Feet	3	x	15	z
Seconds	5	65	y	3.5

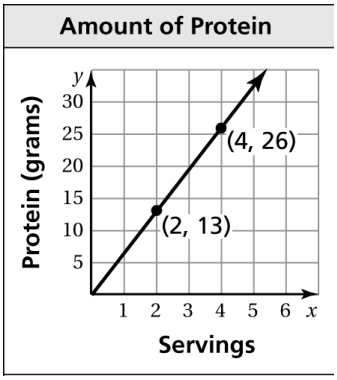
16. You train for a race by running at a speed of 6 miles per hour.

a. At this speed, how many *minutes* does it take you to run 3.2 miles?

b. On race day, you run 3.2 miles in 30 minutes. What is your speed in miles per hour?

17. Three shirts cost $9.99. How much does it cost for 8 shirts?

18. The number of grams of protein is proportional to the number of servings.



a. What is the constant of proportionality?

b. What is the equation that represents this situation?

c. Use your equation to determine how many servings provide 32.5 grams of protein?

d. Use your equation to find how many servings provide 5 grams of protein.

c. How many grams of protein will 7 servings provide?

d. 1 serving is equal to $\frac{3}{4}$ cup, how many cups does it take to get 19.5 grams of protein?

Proportions Word Problems

Write a proportion for each and solve:

1. One day 176 people visited a small art museum. The ratio of members to nonmembers that day was 5 to 11. How many people who visited the museum that day were nonmembers? How many were members

2. The ratio of men to women at a lecture is 2 to 5. A total of 63 people are at the lecture. How many are men? How many are women?

3. 80 girls and boys have planned for a movie. They are in a ratio of 6 girls to 2 boys. How many girls are there?

4. A math book is comprised of two sections: arithmetic and geometry in the ratio 5:3. How much of each type of content will be needed to make a book of 480 pages?

5. Mr. Jose divided his money in the ratio 5:2 between Brian and Bogie. Brian got the smaller amount of $156. How much did Bogie receive?