

Practice 7-3**Understanding Proportions**

Do the ratios in each pair form a proportion? If not rewrite one of ratios to make a proportion

1. $\frac{8}{9}, \frac{4}{3}$

2. $\frac{20}{16}, \frac{18}{15}$

2. $\frac{18}{12}, \frac{21}{14}$

4. $\frac{21}{27}, \frac{35}{45}$

Find the value that completes each proportion.

5. $\frac{4}{5} = \frac{2}{15}$

6. $\frac{8}{7} = \frac{4}{15}$

7. $\frac{3}{2} = \frac{21}{7}$

8. $\frac{?}{5} = \frac{32}{20}$

9. $\frac{7}{8} = \frac{2}{32}$

10. $\frac{5}{4} = \frac{15}{?}$

11. $\frac{10}{15} = \frac{24}{?}$

12. $\frac{9}{12} = \frac{?}{16}$

Write and solve a proportion for each problem.

13. It costs \$15 to buy 5 packs of baseball cards. How much will it cost to buy 25 packs of baseball cards?

14. There are 35 children and 6 adults at a preschool. To keep the same child to adult ratio, how many adults are needed for 140 children?

15. Sam is making dinner for four people. The recipe calls for 15 ounces of steak. How much steak will he need if he makes dinner for 10 people?

16. Brenda is selling magazines. Two subscriptions sell for \$15.99. How much will 8 subscriptions cost?

Puzzle 7-4

Solving Proportions

Audrey's school is having a Soup Luncheon. They are using the recipe below.

Vegetable Soup (serves 8)

- | | |
|---------------------------------|------------------------------|
| 1 cup pasta | 1 cup carrots |
| 6 cups vegetable stock | 3 cups potatoes |
| $\frac{1}{2}$ pound white beans | 1 can tomatoes |
| 1 cup onion | 2 bunches spinach |
| 2 cups celery | 3 tablespoons fresh rosemary |

1. The school expects that 24 people will attend the luncheon. Fill in the amounts for the recipe they will need to use.

- | | |
|-----------------------|----------------------|
| _____ pasta | _____ carrots |
| _____ vegetable stock | _____ potatoes |
| _____ white beans | _____ tomatoes |
| _____ onion | _____ spinach |
| _____ celery | _____ fresh rosemary |

2. The night before the luncheon, the committee discovers that a total of 64 people have signed up to attend. Fill in the amounts for the recipe they will need to use.

- | | |
|-----------------------|----------------------|
| _____ pasta | _____ carrots |
| _____ vegetable stock | _____ potatoes |
| _____ white beans | _____ tomatoes |
| _____ onion | _____ spinach |
| _____ celery | _____ fresh rosemary |

3. Sandra, one of the students, decides she will also make the soup for her family reunion, but she is allergic to one of the ingredients in the recipe so she decides to leave it out. When Sandra's soup is prepared for the reunion, which has 44 attendees, the amount that will be left out of the original soup recipe is 11 cups.

To which ingredient is Sandra allergic? _____

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