

Chapter Test A

For use after Chapter 11

Solve the proportion. Check for extraneous solutions.

1. $\frac{5}{x} = \frac{8}{15}$

2. $\frac{x}{9} = \frac{4}{x}$

3. $\frac{4}{x+1} = \frac{3}{x+2}$

4. $\frac{x}{x+3} = \frac{x-2}{x}$

5. You are shopping and find the same shirt at two different stores. One store is selling the shirt for \$25 and the other store is selling the shirt for 10% off the original price of \$28. Which is the better buy?

Solve the percent problem.

6. How much is 40% of \$80?
 7. 36 inches is 12% of what length?
 8. 12 people is what percent of 48 people?
 9. \$6 is 15% of what amount of money?

The variables x and y vary directly. Use the given values to write an equation that relates x and y .

10. $x = 5, y = 25$

11. $x = 12, y = 4$

The variables x and y vary inversely. Use the given values to write an equation that relates x and y .

12. $x = 3, y = 6$

13. $x = 15, y = 5$

Simplify the expression if possible.

14. $\frac{8x}{40}$

15. $\frac{2x^2 - 4x}{x - 2}$

For what values of the variable is the rational expression undefined?

16. $\frac{3}{x-5}$

17. $\frac{8}{x+2}$

Simplify the expression.

18. $\frac{5x}{2} \cdot \frac{1}{x}$

19. $\frac{12x}{5} \div \frac{6x}{7}$

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2. _____

3. _____

4. _____

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