CHAPTER 11

NAME _____ DATE _____

Chapter Test C

For use after Chapter 11

Solve the proportion. Check for extraneous solutions.

1. $\frac{x}{16} = \frac{4}{x}$

2. $\frac{48}{x} = \frac{x}{3}$

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

4. $\frac{x^2-16}{x+4} = \frac{x-4}{2}$

5. You are shopping and find the same shirt at two different stores. One store is selling the shirt for \$26.99 and the other store is selling the shirt for 10% off the original price of \$30. Which is the better buy?

Solve the percent problem.

6. How much is 17% of \$55?

7. 26 feet is 130% of what length?

8. 140 people is what percent of 350 people?

9. \$57.75 is 33% 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. $x = 12, y = 18$

11. $x = 24, y = 20$

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

12. $x = 1.5, y = 50$

13. $x = 65, y = \frac{2}{5}$

Simplify the expression if possible.

14. $\frac{5x+4}{15x^2+12x}$

15. $\frac{x^2+4x-32}{x^3+9x^2+8x}$

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

16. $\frac{x+4}{x^2+6x+8}$

17. $\frac{3x+9}{x^2-9}$

Simplify the expression.

18. $\frac{2x}{x^2+9x+20} \cdot \frac{x^2-4x-32}{3x^2}$

19. $\frac{x^2+5x-24}{x^2-2x-8} \div \frac{4x^2+32x}{2x+4}$

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Review and Assess

CHAPTER 11 CONTINUED

NAME _____ DATE _____

Chapter Test C

For use after Chapter 11

Simplify the expression.

20. $\frac{2x - 1}{x - 7} + \frac{3x + 5}{x - 7}$

21. $\frac{8x - 3}{x + 8} - \frac{9x - 5}{x + 8}$

22. $\frac{x + 3}{x + 1} + \frac{2x - 5}{x - 2}$

23. $\frac{x - 2}{x^2 - 9} - \frac{x + 5}{x + 4}$

Divide.

24. Divide $3x^2 + 13x - 10$ by $x + 5$.

25. Divide $12x^2 - 23x - 24$ by $4x + 3$.

26. The area and one dimension of a rectangle are shown. Find the missing dimension.

Solve the equation.

27. $\frac{2}{x + 1} = \frac{5}{3(x + 2)}$

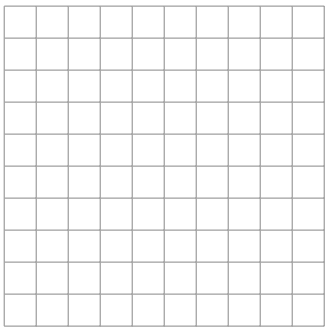
28. $\frac{5}{x} - \frac{3}{2x} = \frac{1}{2}$

29. $\frac{x + 4}{x - 5} = \frac{12 + 5x}{x^2 - 2x - 15}$

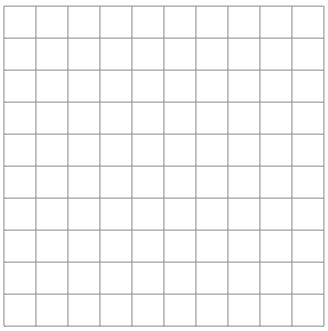
30. $\frac{4x}{x + 4} - \frac{x}{x - 3} = \frac{-2x + 5}{x^2 + x - 12}$

Sketch a graph of the function.

31. $y = \frac{-2x + 1}{x + 3}$



32. $y = \frac{4x + 13}{x - 5}$



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Review and Assess