LESSON 9.6

NAME _____ DATE _____

Practice B

For use with pages 568–574

Determine whether the given *x*-value is a solution of the equation.

1. $\frac{1}{x-3} + \frac{1}{x+3} = \frac{10}{x^2-9}, x = 5$

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

Solve the equation by using the LCD. Check each solution.

3. $\frac{3x}{x-2} = 1 + \frac{6}{x-2}$

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

5. $\frac{2}{2x+5} + \frac{3}{2x-5} = \frac{5x+5}{4x^2-25}$

6. $\frac{5}{2x+3} + \frac{4}{2x-3} = \frac{14x+3}{4x^2-9}$

7. $-\frac{15}{x} - 4 = \frac{6}{x} + 3$

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

Solve the equation by cross multiplying. Check each solution.

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

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

11. $\frac{7}{x+3} = \frac{x}{4}$

12. $\frac{6+5x}{3x} = \frac{7}{x}$

13. $\frac{x}{x^2-8} = \frac{2}{x}$

14. $\frac{2x}{5} = \frac{x^2-5x}{5x}$

Solve the equation using any method. Check each solution.

15. $\frac{5x}{x-2} = 7 + \frac{10}{x-2}$

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

17. $\frac{3x}{x+1} = \frac{12}{x^2-1} + 2$

18. $\frac{6}{x} - \frac{7x}{5} = \frac{x}{10}$

19. $\frac{3}{x} + 12 = 2 + \frac{4}{3x}$

20. $\frac{x^2+2x+2}{x-1} = \frac{2x+3}{x-1}$

21. ***Average Cost*** A greeting card manufacturer can produce a dozen cards for $6.50. If the initial investment by the company was $60,000, how many dozen cards must be produced before the average cost per dozen falls to $11.50?

22. ***Brakes*** The braking distance of a car can be modeled by $d = s + \frac{s^2}{20}$ where d is the distance (in feet) that the car travels before coming to a stop, and s is the speed at which the car is traveling (in miles per hour). Find the speed that results in a braking distance of 75 feet.