Name _____ Date _____

LESSON 9.6

Practice B

For use with the lesson "Solve Quadratic Equations by the Quadratic Formula"

Use the quadratic formula to solve the equation. Round your solutions to the nearest hundredth, if necessary.

1. $x^2 + 7x - 80 = 0$

2. $3x^2 - x - 16 = 0$

3. $8x^2 - 2x - 30 = 0$

4. $x^2 + 4x + 1 = 0$

5. $-x^2 + x + 12 = 0$

6. $-3x^2 - 4x + 10 = 0$

7. $5x^2 + 30x + 32 = 0$

8. $x^2 + 6x - 100 = 0$

9. $4x^2 - x - 20 = 0$

10. $5x^2 + x - 9 = 0$

11. $6x^2 + 7x - 3 = 0$

12. $10x^2 - 7x + 5 = 0$

Tell which method(s) you would use to solve the quadratic equation. *Explain* your choice(s).

13. $6x^2 - 216 = 0$

14. $8x^2 = 56$

15. $5x^2 - 10x = 0$

16. $x^2 + 8x + 7 = 0$

17. $x^2 - 6x + 1 = 0$

18. $-9x^2 + 10x = 5$

Solve the quadratic equation using any method. Round your solutions to the nearest hundredth, if necessary.

19. $-10x^2 = -50$

20. $x^2 - 16x = -64$

21. $x^2 + 3x - 8 = 0$

22. $x^2 = 14x - 49$

23. $x^2 + 6x = 14$

24. $-5x^2 + x = 13$

25. **Pasta** For the period 1990–2003, the amount of biscuits, pasta, and noodles y (in thousands of metric tons) imported into the United States can be modeled by the function $y = 1.36x^2 + 27.8x + 304$ where x is the number of years since 1990.

a. Write and solve an equation that you can use to approximate the year in which 500 thousand metric tons of biscuits, pasta, and noodles were imported.

b. Write and solve an equation that you can use to approximate the year in which 575 thousand metric tons of biscuits, pasta, and noodles were imported.

26. **Eggs** For the period 1997–2003, the number of eggs y (in billions) produced in the United States can be modeled by the function $y = -0.27x^2 + 3.3x + 77$ where x is the number of years since 1997.

a. Write and solve an equation that you can use to approximate the year(s) in which 80 billion eggs were produced.

b. Graph the function on a graphing calculator. Use the *trace* feature to find the year when 80 billion eggs were produced. Use the graph to check your answer from part (a).