

LESSON
10.6**Practice** *continued*
For use with pages 671–676

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 million pounds of biscuits, pasta, and noodles were imported.

b. Write and solve an equation that you can use to approximate the year in which 575 million pounds 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).