Name

9-5B Lesson Master

Questions on SPUR Objectives
See pages 576–579 for objectives.

SKILLS Objective B

1. If $2x^2 - 5x - 12 = 0$, complete the following.

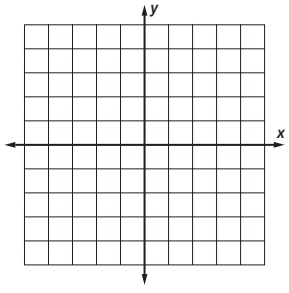
a. The equation is given in the form $ax^2 + bx + c = 0$. What are the values of a, b, and c?

b. Solve the equation using the Quadratic Formula.

c. Fill in the table of values below.

x	–2	0	2	4	6
y					

d. Graph the equation to check your solutions.



2. If $25 = -2x^2 + 15x$, complete the following.

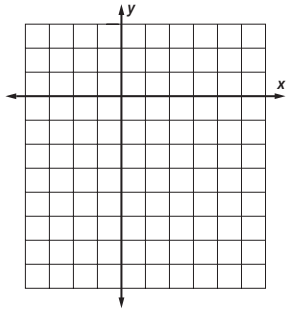
a. Rewrite the equation in the form $ax^2 + bx + c = 0$. What are the values of a, b, and c?

b. Solve the equation using the Quadratic Formula.

c. Fill in the table of values below.

x	2	3	4	5	6
y					

d. Graph the equation to check your solutions.



Name

9-5B page 2

In 3–5, solve using the Quadratic Formula. Give exact answers.

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

4. $-4r = 2r^2 + 1$

5. $y^2 = 7y - 1$

In 6–11, solve using the Quadratic Formula. Round answers to the nearest hundredth.

6. $3a^2 - 6 = 0$

7. $5m^2 - 10 = 7m$

8. $5y^2 = 6y + 27$

9. $21n^2 - n = 2$

10. $6(h^2 - 2h) = 7$

11. $4x^2 - 15x = 0$

12. In 15-meter platform diving, the function $h(t) = -4.9t^2 + 4.3t + 15$ gives the approximate height h (in meters) above the water a diver is t seconds after launching the dive. How many seconds elapse from the time the diver leaves the 15-meter platform until the diver hits the water?

13. If a diver dives from a 25-foot platform with an initial velocity of 18 feet per second, the diver's approximate height in feet can be represented by the function $h(t) = -16t^2 + 18t + 25$, where h is the height and t is the time in seconds.

   a. Find $h(1)$. Write a sentence explaining what it means.

   b. Estimate the length of time the diver will be in the air before hitting the water.