

Name _____

6-10A Lesson Master

Questions on SPUR Objectives

See Student Edition pages 446–449 for objectives.

SKILLS Objective C

In 1 and 2, solve the equation. Write nonreal numbers in $a + bi$ form.

1. $x^2 - 6x + 13 = 0$

2. $2n^2 = 4n + 3$

PROPERTIES Objective H

In 3–5, a. find the discriminant of each equation, b. give the number of solutions, and c. tell whether the solutions are *rational*, *irrational*, or *nonreal*.

3. $x^2 - 7x + 16 = 0$ a. _____ b. _____ c. _____

4. $6r^2 - 9r + \frac{4}{3} = 0$ a. _____ b. _____ c. _____

5. $-16t^2 + 18t - 4 = 0$ a. _____ b. _____ c. _____

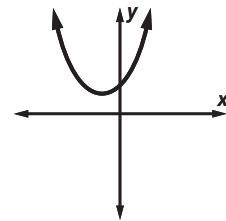
REPRESENTATIONS Objective K

6. The graph at the right shows a quadratic function $y = ax^2 + bx + c$. Determine whether each expression is *positive*, *negative*, or *zero*.

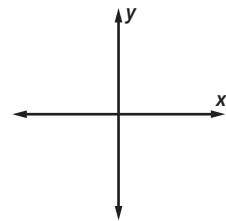
a. a _____

b. $b^2 - 4ac$ _____

c. c _____



7. Sketch a graph of a quadratic function $y = ax^2 + bx + c$ where $a < 0$ and $b^2 - 4ac = 0$ at the right.



REPRESENTATIONS Objective L

8. Without drawing a graph, determine the number of x -intercepts of each function.

a. $f(x) = -2x^2 + 10x - 12$ _____ b. $g(x) = -2x^2 + 10x - 13$ _____

9. For what values of a does the graph of $y = ax^2 + 18x + 27$ have two x -intercepts?
