

Name _____

6-4B Lesson Master

Questions on SPUR Objectives
See Student Edition pages 446–449 for objectives.

SKILLS Objective B

In 1–6, rewrite the equation in standard form.

1. $y + 6 = (x - 3)^2$ _____
2. $y - 1 = 2(x - 4)^2$ _____
3. $y = (x + 7)^2$ _____
4. $y = -3(x + 5)^2 + 8$ _____
5. $y + 14 = -x^2$ _____
6. $y - 2 = \frac{2}{3}(x - 9)^2$ _____

PROPERTIES Objective G

In 7–10, determine whether the given parabola is congruent to $y = 9x^2$.

7. $y - 6 = (9x + 1)^2$ _____
8. $y - 6 = (3x + 1)^2$ _____
9. $y - 6 = \frac{1}{9}(9x + 1)^2$ _____
10. $y - 6 = \frac{1}{9}(3x + 1)^2$ _____

USES Objective I

11. Suppose a ball is thrown upward from a height of 5 feet with an initial velocity of $35 \frac{\text{ft}}{\text{sec}}$.
 - a. Write an equation relating the time t and the height h of the ball. _____
 - b. Find the height of the ball after 2 seconds. _____
 - c. Is the ball still in the air after 3 seconds? Explain.

12. Yoko threw a stone upward at a speed of $10 \frac{\text{m}}{\text{sec}}$ while standing on a cliff 40 m above the ground.
 - a. What was the height of the stone after 3 seconds? _____
 - b. Estimate how long it took for the stone to touch the ground. _____

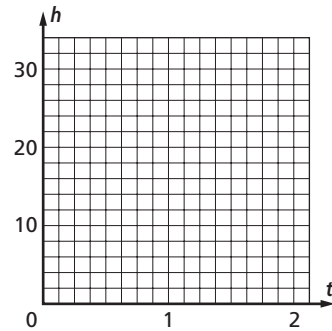
Name _____

6-4B

page 2

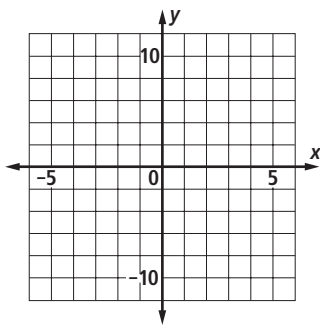
13. Kenny is standing on a bridge 22 feet above the water. Suppose he drops a ball over the 3-foot railing.
- Write an equation relating the time t (in seconds) and the height h (in feet) of the ball above the water.

 - Graph the equation from Part a at the right.
 - Estimate how long it will take for the ball to hit the water. Explain your reasoning.

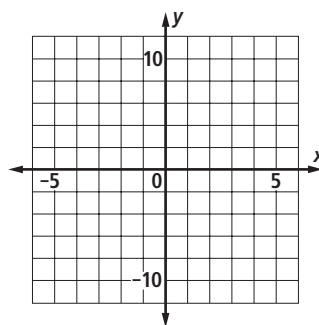


REPRESENTATIONS Objective K

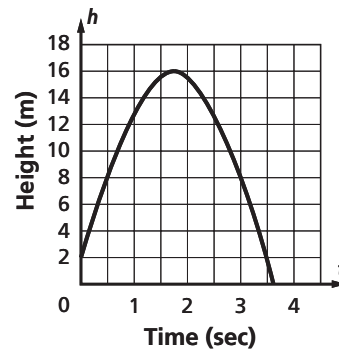
14. Graph $y = x^2 + 2x - 8$ below.



15. Graph $y = -2x^2 + 7x + 5$ below.



16. The height of a ball thrown upward is shown as a function of time on the graph at the right.



- Estimate the initial height of the ball.

- Approximately when did the ball reach its maximum height?

- What was the maximum height?

- When was the ball 8 meters high?

Copyright © Wright Group/McGraw-Hill