

Name \_\_\_\_\_

# 2-5B Lesson Master

**Questions on SPUR Objectives**  
See Student Edition pages 143–147 for objectives.

## VOCABULARY

- Fill in the Blank** A graph *symmetric* to the  $y$ -axis coincides with its \_\_\_\_\_ image over the  $y$ -axis.
- Fill in the Blank** For all graphs of parabolas  $y = kx^2$ , the point  $(0, 0)$  is the \_\_\_\_\_.
- For what values of  $k$  is  $(0, 0)$  the *maximum* point of  $y = kx^2$ ? \_\_\_\_\_

## SKILLS Objective C

In 4 and 5, consider the equation  $y = 6x^2$ . Find the rate of change between

- $x = 2$  and  $x = 5$ . \_\_\_\_\_
- $x = -2$  and  $x = 2$ . \_\_\_\_\_

In 6 and 7, consider the equation  $y = -2x^2$ . Find the rate of change between

- $x = 4$  and  $x = 6$ . \_\_\_\_\_
- $x = 6$  and  $x = 8$ . \_\_\_\_\_

## PROPERTIES Objective E

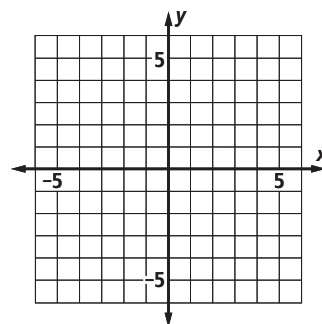
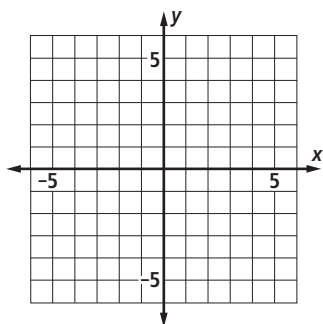
In 8 and 9, consider the graph of the variation equation  $y = kx^2$ .

- If the graph has points in the second quadrant, what do you know about  $k$ ? \_\_\_\_\_
- If  $k < 0$ , give the range of the function. \_\_\_\_\_
- Multiple Choice** Which of these equations has  $(0, 0)$  as a maximum value? \_\_\_\_\_  
 A  $y = 3x^2$       B  $y = -3x^2$       C  $y = 3 - x^2$       D  $y = 3x$       E  $y = x^2 - 3$

## REPRESENTATIONS Objective I

In 11 and 12, graph the equations for a. and b. on the same grid below each question.

- a.  $y = 5x^2$       b.  $y = -5x^2$       12. a.  $y = \frac{1}{2}x^2$       b.  $y = -\frac{1}{2}x^2$



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**2-5B**

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**REPRESENTATIONS** Objective J

13. **Matching** Match each graph with its equation. Axes have the same scale.

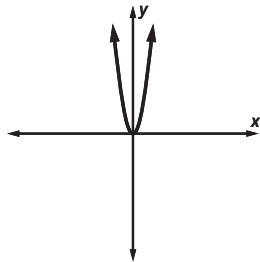
i.  $y = -3x$

ii.  $y = x^2$

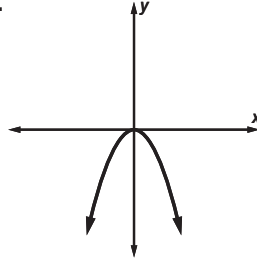
iii.  $y = 3x^2$

iv.  $y = -x^2$

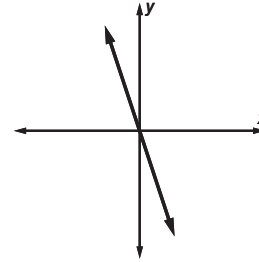
a.



b.



c.



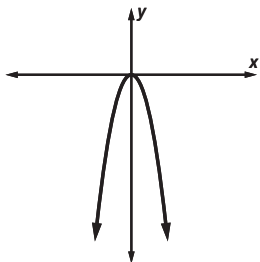
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Multiple Choice** In 14 and 15, select the equation whose graph looks most like the one shown. Assume the scales on both axes are the same.

14.



A  $y = 3.5x$

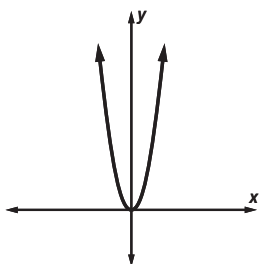
\_\_\_\_\_

B  $y = 3.5x^2$

C  $y = -3.5x$

D  $y = -3.5x^2$

15.



A  $y = 5x$

\_\_\_\_\_

B  $y = -5x$

C  $y = 5x^2$

D  $y = -5x^2$

**REVIEW** Lesson 1-4, Objective H

16. At the right is the graph of a function. Find the

a. range. \_\_\_\_\_

b. domain. \_\_\_\_\_

c. values of  $x$  for which  $f(x) = 0$ . \_\_\_\_\_

