

Name \_\_\_\_\_

# 9-1B Lesson Master

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

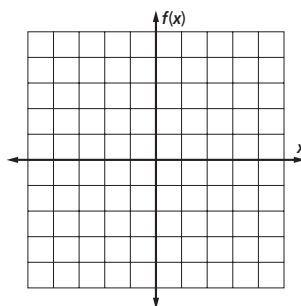
## REPRESENTATIONS Objective G

1. Let  $f(x) = \frac{1}{4}x^2$ .

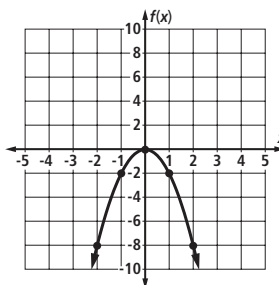
- a. What are the coordinates of the vertex? \_\_\_\_\_
- b. Is the vertex a minimum or a maximum? \_\_\_\_\_
- c. Complete the table of values below.

$x$	-4	-3	-2	-1	0	1	2	3	4
$f(x)$									

- d. Graph the equation.



2. Refer to the graph at the right.



- a. Does the parabola open up or down? \_\_\_\_\_
- b. What are the coordinates of the vertex? \_\_\_\_\_
- c. Is the vertex a minimum or a maximum? \_\_\_\_\_
- d. Use the graph to estimate the value of  $f(1.5)$ . \_\_\_\_\_
- e. Is  $(-3, -10)$  a point of the graph? Explain how you know.

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\_\_\_\_\_

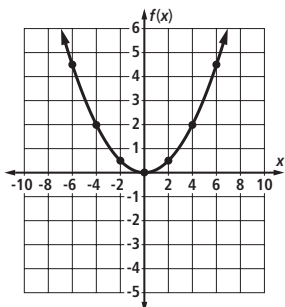
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3. The graph below has equation  $f(x) = 0.125x^2$ .



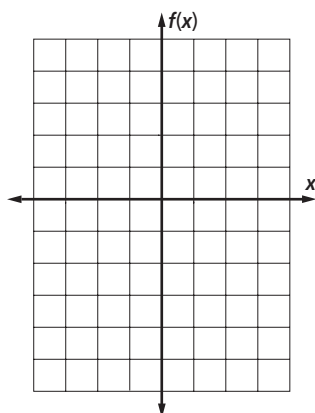
- a. Find  $y$  if  $x = 0$ . \_\_\_\_\_
- b. From the graph, estimate the value of  $y$  if  $x = -5$ . \_\_\_\_\_
- c. Find the  $x$  values if  $y = 2$ . \_\_\_\_\_
- d. From the graph, estimate the value(s) of  $x$  for which  $y = 4.5$ . \_\_\_\_\_
- e. What is the axis of symmetry for this function? \_\_\_\_\_

4. Consider the function  $f(x) = -\frac{2}{5}x^2$ .

a. Complete the table of values below.

$x$	-15	-10	-5	0	5	10	15
$f(x)$							

b. Graph the equation.



- c. Use the graph to estimate the value(s) of  $x$  when  $y = -25.6$ . \_\_\_\_\_
- d. The point  $(14, -78.4)$  lies on this parabola. What are the coordinates of its reflection image over the  $y$ -axis? \_\_\_\_\_