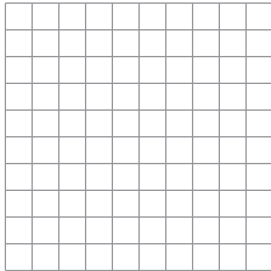


3.5 Notetaking with Vocabulary (continued)

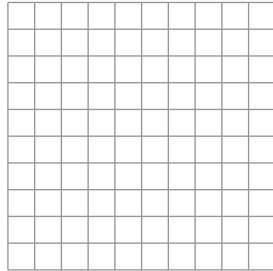
Extra Practice

In Exercises 1–3, solve the system by graphing. Check your solution(s).

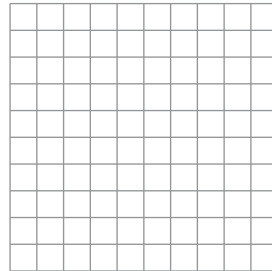
1. $y = \frac{1}{2}x^2 - 3$
 $y = -4 - 2x^2$



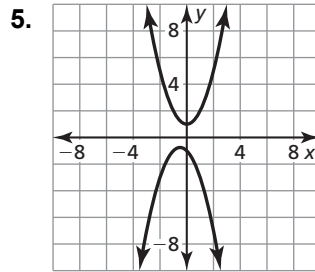
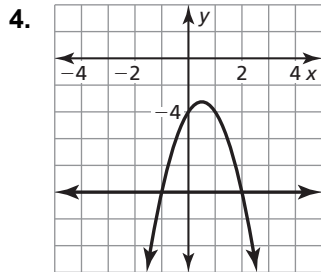
2. $y = (x - 2)^2$
 $y = \frac{1}{4}x - \frac{1}{2}$



3. $y = -x^2 - 2$
 $y = 4(x + 1) - 3$



In Exercises 4 and 5, solve the system of nonlinear equations by using the graph.



In Exercises 6–8, solve the system by substitution.

6. $y = x + 4$
 $y = (x + 2)^2 + 1$

7. $x^2 + y^2 = 16$
 $y = -x + 4$

8. $2x^2 + 10x + 48 = y - 10x$
 $-4x^2 - 16x = y$

3.5 Notetaking with Vocabulary (continued)

In Exercises 9–11, solve the system by elimination.

9. $x^2 - 7x + 11 = y - 1$
 $-x + y = -4$

10. $y = 9x^2 + 6x + 2$
 $y = x^2 - 8x - 19$

11. $-5x + 29 = y - x^2$
 $x^2 + y = 2x^2 - 1$

12. Consider the following system.

$$x^2 = 9 - y^2$$
$$x + 2y = 2x^2 + 7 + x$$

a. Which method would you use to solve the system? Explain your reasoning.

b. Would you have used a different method if the system had been as follows? Explain.

$$x = 9 - y$$
$$x + 2y = 2x^2 + 7 + x$$

13. The sum of two numbers is -5 , and the sum of the squares of the two numbers is 17. What are the two numbers? Explain your reasoning.