GUIDED PRACTICE for Examples 3 and 4

Solve the system.

7. $-2y^2 + x + 2 = 0$
$x^2 + y^2 - 1 = 0$

8. $x^2 + y^2 - 16x + 39 = 0$
$x^2 - y^2 - 9 = 0$

9. $x^2 + 4y^2 + 4x + 8y = 8$
$y^2 - x + 2y = 5$

10. WHAT IF? In Example 4, suppose that a ship's LORAN system locates the ship on the two hyperbolas whose equations are given below. Find the ship's location if it is south of the x-axis.

$x^2 - y^2 - 12x + 18 = 0$ Equation 1
$y^2 - x^2 - 4y + 2 = 0$ Equation 2

9.7 EXERCISES

HOMEWORK KEY

= **WORKED-OUT SOLUTIONS** on p. WS1 for Exs. 5, 15, and 41

= **TAKS PRACTICE AND REASONING** Exs. 21, 34, 42, 44, 46, and 47

SKILL PRACTICE

1. VOCABULARY Copy and complete: The equations $x^2 + 5x + 3y^2 = 9$ and $4x^2 - 12y + 16 = 0$ form a(n) ? system of equations.

2. WRITING *Explain* what method you would use to solve the following system. Do not solve the system.

$3x^2 + y^2 - 5x = 0$ Equation 1
$2x^2 + y^2 - 15 = 0$ Equation 2

EXAMPLE 1 on p. 658 for Exs. 3–8

SOLVING BY GRAPHING **Solve the system using a graphing calculator.**

3. $x^2 + y^2 - 32 = 0$
$y - x = 0$

4. $y + 2x^2 - 9 = 0$
$y + 4x + 1 = 0$

5. $y - 3x + 4 = 0$
$-3x^2 + y^2 - 6 = 0$

6. $y + 2x = 6$
$3x^2 + y^2 = 12$

7. $x^2 + y^2 = 16$
$y - 2x = 1$

8. $3(y + 3)^2 + 4x = 0$
$y - 2x = 11$

EXAMPLE 2 on p. 659 for Exs. 9–21

SOLVING BY SUBSTITUTION **Solve the system using substitution.**

9. $y^2 - x - 6 = 0$
$y + x = 0$

10. $x^2 + y^2 - 25 = 0$
$y = 2x - 10$

11. $-2x + y - 8 = 0$
$x^2 + 4y^2 - 40 = 0$

12. $-x^2 + 2y^2 = 8$
$-x + y = -2$

13. $6x^2 + 3y^2 = 12$
$y = -x + 2$

14. $-3x + y = 6$
$8x + y^2 + 24 = 0$

15. $4x^2 - 5y^2 = -76$
$2x + y = -6$

16. $x^2 + y^2 = 20$
$y = x - 4$

17. $9x^2 + 4y^2 = 36$
$-x + y = -4$

18. $x^2 + 6x + 4y - 3 = 0$
$y + 3x + 1 = 0$

19. $4x^2 + 2y^2 - x - y = 6$
$3x - y = 2$

20. $4x^2 - y^2 - 32x - 2y = -59$
$2x + y - 7 = 0$

21. TAKS REASONING Which ordered pair is a solution of the linear-quadratic system below?

$6x^2 - 5x + 8y^2 + y = 23$
$-x + y = -1$

A $(-1, -2)$ **B** $(2, 1)$ **C** $(3, 2)$ **D** $(-2, -3)$