

3.3 EXERCISES

HOMWORK KEY

 = **WORKED-OUT SOLUTIONS**
on p. WS1 for Exs. 9, 19, and 37

 = **TAKS PRACTICE AND REASONING**
Exs. 3, 26, 27, 36, 39, 41, and 42

 = **MULTIPLE REPRESENTATIONS**
Ex. 37

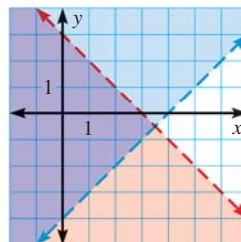
SKILL PRACTICE

1. **VOCABULARY** What must be true in order for an ordered pair to be a solution of a system of linear inequalities?

2. **WRITING** Describe how to graph a system of linear inequalities.

3.  **TAKS REASONING** Which system of inequalities is represented by the graph?

- (A)** $x + y > 3$ **(B)** $-x + y \geq -4$
 $-x + y < -4$ $x + y \leq 3$
(C) $-2x + y > -4$ **(D)** $-x + y > -4$
 $2x + y < 3$ $x + y < 3$



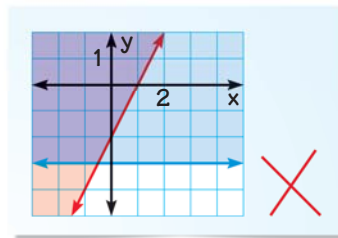
SYSTEMS OF TWO INEQUALITIES Graph the system of inequalities.

4. $x > -1$
 $x < 3$
 5. $x \leq 2$
 $y \leq 5$
 6. $y \geq 5$
 $y \leq 1$
 7. $-x + y < -3$
 $-x + y > 4$
 8. $y < 10$
 $y > |x|$
 9. $4x - 4y \geq -16$
 $-x + 2y \geq -4$
 10. $-x \geq y$
 $-x + y \geq -5$
 11. $y > |x| - 4$
 $3y < -2x + 9$
 12. $x + y \geq -3$
 $-6x + 4y < 14$
 13. $2y < -5x - 10$
 $5x + 2y > -2$
 14. $3x - y > 12$
 $-x + 8y > -4$
 15. $x - 4y \leq -10$
 $y \leq 3|x - 1|$

16. **ERROR ANALYSIS** Describe and correct the error in graphing the system of inequalities.

$$y \geq -3$$

$$y \leq 2x - 2$$



SYSTEMS OF THREE OR MORE INEQUALITIES Graph the system of inequalities.

17. $x < 6$
 $y > -1$
 $y < x$
 18. $x \geq -8$
 $y \leq -1$
 $y < -2x - 4$
 19. $3x + 2y > -6$
 $-5x + 2y > -2$
 $y < 5$
 20. $x + y < 5$
 $2x - y > 0$
 $-x + 5y > -20$
 21. $x \geq 2$
 $-3x + y < -1$
 $4x + 3y < 12$
 22. $y \geq x$
 $x + 3y < 5$
 $2x + y \geq -3$
 23. $y \geq 0$
 $x > 3$
 $x + y \geq -2$
 $y < 4x$
 24. $x + y < 5$
 $x + y > -5$
 $x - y < 4$
 $x - y > -2$
 25. $x \leq 10$
 $x \geq -2$
 $3x + 2y < 6$
 $6x + 4y > -12$

EXAMPLES 1, 2, and 3

on pp. 168–169
for Exs. 3–16

EXAMPLE 4

on p. 170
for Exs. 17–25