

**LESSON**  
**5.7**

**Practice A**

For use with the lesson "Graph Linear Inequalities in Two Variables"

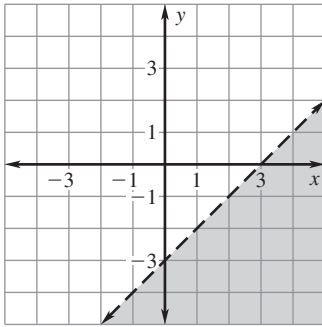
**Tell whether the ordered pair is a solution of the inequality.**

- |                                 |                                   |                                   |
|---------------------------------|-----------------------------------|-----------------------------------|
| 1. $x + y < 3$ ; (0, 0)         | 2. $x + y \geq -9$ ; (1, -10)     | 3. $x - y < 12$ ; (18, 6)         |
| 4. $2x + y > -14$ ; (-5, 8)     | 5. $x + 3y \leq -15$ ; (8, -8)    | 6. $x - 6y \geq 10$ ; (-7, -3)    |
| 7. $4x + 3y \geq 11$ ; (-3, 3)  | 8. $6x - 2y < 7$ ; (3, -5)        | 9. $4y - 2x > -6$ ; (4, -2)       |
| 10. $-5x + 4y < -2$ ; (2, 3)    | 11. $7x - 2y \geq -11$ ; (2, -11) | 12. $9y - x \geq 1$ ; (-1, 1)     |
| 13. $-2x - 6y \geq 2$ ; (5, -2) | 14. $-3x + 8y < -5$ ; (-4, -2)    | 15. $-2y + 7x \geq -20$ ; (-1, 6) |

**Match the inequality with its graph.**

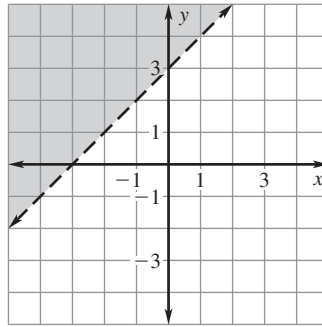
16.  $y - x > 3$

A.



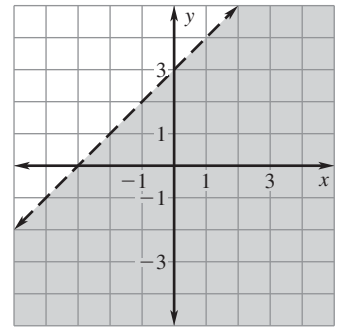
17.  $x - y > 3$

B.



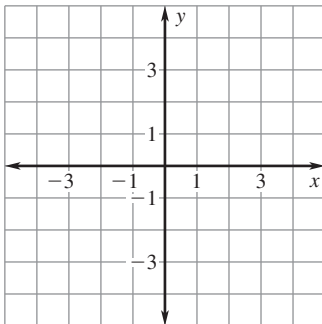
18.  $y - x < 3$

C.

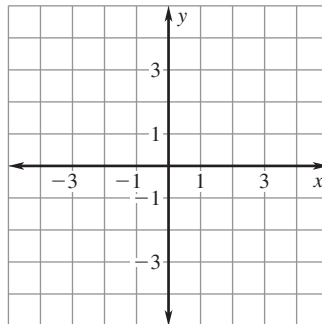


**Graph the inequality.**

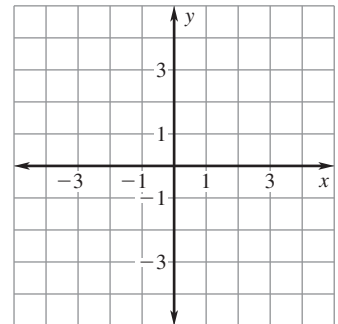
19.  $y > x - 2$



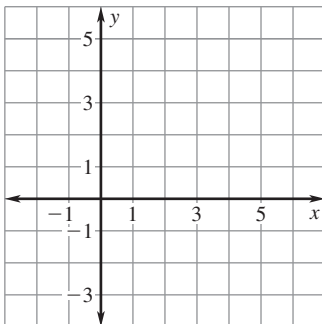
20.  $y \leq x + 4$



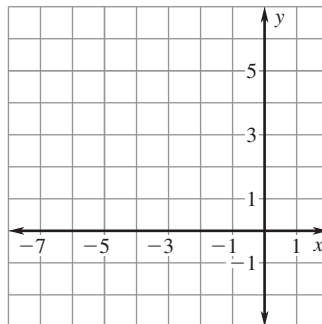
21.  $y \geq -x$



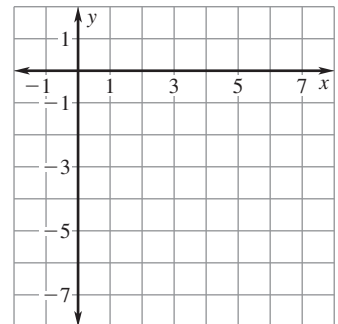
22.  $y < 5 - x$



23.  $y - x \geq 6$



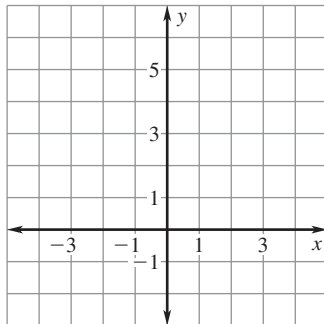
24.  $x - y < 7$



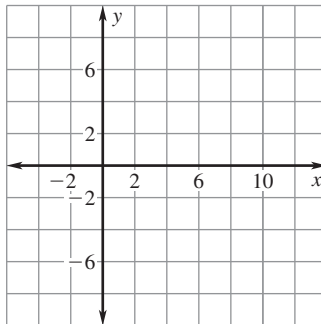
**LESSON**  
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**Practice A** *continued*  
*For use with the lesson "Graph Linear Inequalities in Two Variables"*

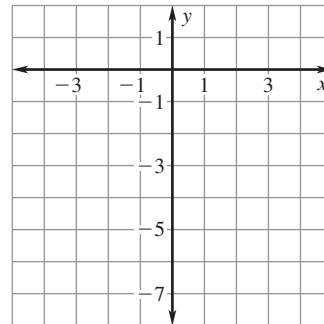
25.  $y \geq 4$



26.  $x \leq 10$

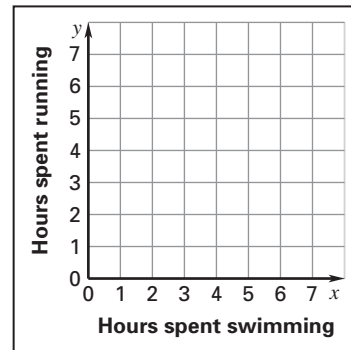


27.  $y < -3$

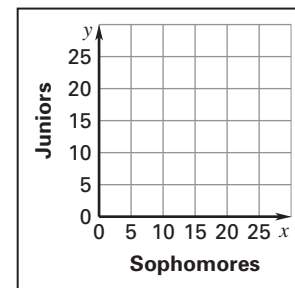


28. **Exercise** To keep in shape, you try to swim and run at least 6 hours a week. Let  $x$  represent the amount of time you spend swimming in one week and let  $y$  represent the amount of time you spend running in one week.

- Write an inequality that describes the number of hours you exercise each week in terms of  $x$  and  $y$ .
- Graph the inequality.
- Give three possible combinations of hours that allow you to meet your goal.



29. **Debate Club** The debate club at your school has 20 members. Sophomores, juniors, and seniors may participate in this club. Let  $x$  represent the number of sophomores and let  $y$  represent the number of juniors in this club. Write and graph an inequality that describes the different numbers of sophomores and juniors in the debate club.



30. **Basketball** In the last quarter of a high school basketball game, your team is behind by 34 points. A field goal is 2 points and a foul shot is 1 point. The coach doesn't want the team shooting any 3-point shots. Let  $x$  represent the number of field goals scored. Let  $y$  represent the number of foul shots scored. Write and graph an inequality that models the different numbers of field goals and foul shots your team could score to win or tie the game. (Assume that the other team scores no more points.)

