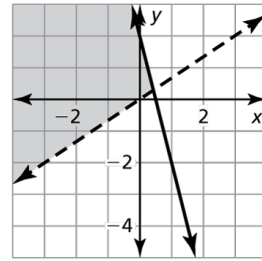


# 5.7

## Practice A

In Exercises 1–4, tell whether the ordered pair is a solution of the inequality whose graph is shown.



- |             |               |
|-------------|---------------|
| 1. $(2, 1)$ | 2. $(-3, -2)$ |
| 3. $(0, 2)$ | 4. $(-1, -4)$ |

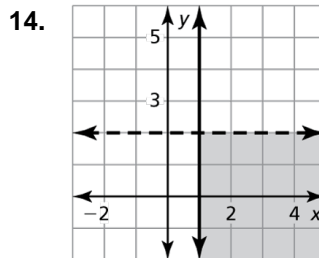
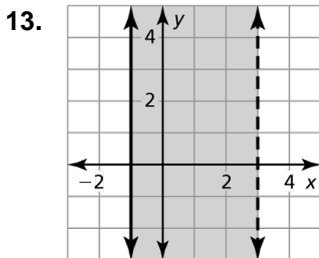
In Exercises 5 and 6, tell whether the ordered pair is a solution of the system of linear inequalities.

- |                                       |                                    |
|---------------------------------------|------------------------------------|
| 5. $(2, -1); y \geq 3$<br>$y < x + 1$ | 6. $(7, -4); y < 0$<br>$y < x - 3$ |
|---------------------------------------|------------------------------------|

In Exercises 7–12, graph the system of linear inequalities.

- |                                   |                             |                                       |
|-----------------------------------|-----------------------------|---------------------------------------|
| 7. $y > 2$<br>$x < -3$            | 8. $y \leq 1$<br>$y > 4$    | 9. $y \leq -2x$<br>$y > 1$            |
| 10. $y \leq x + 2$<br>$y > x - 2$ | 11. $y < 2x$<br>$y < x + 1$ | 12. $3x + y \leq 0$<br>$-2x + y > -1$ |

In Exercises 13 and 14, write a system of linear inequalities represented by the graph.



15. You can spend at most \$60 on beads. A bag containing red beads costs \$2 per bag. A bag containing blue beads costs \$3 per bag. You need more bags of blue beads than bags of red beads.
- Write and graph a system of linear inequalities that represents the situation.
  - Identify and interpret a solution of the system.
  - Use the graph to determine whether you can buy 9 bags of red beads and 12 bags of blue beads.

## 5.7 Practice B

In Exercises 1 and 2, tell whether the ordered pair is a solution of the system of linear inequalities.

1.  $(2, 0)$ ;  $y > x - 5$   
 $y \leq 2x + 1$

2.  $(1, 4)$ ;  $y < 2x + 2$   
 $y \geq -3x + 4$

In Exercises 3–8, graph the system of linear inequalities.

3.  $x + y \leq 2$   
 $y \leq 1$

4.  $3x + y > 4$   
 $y < -3x + 1$

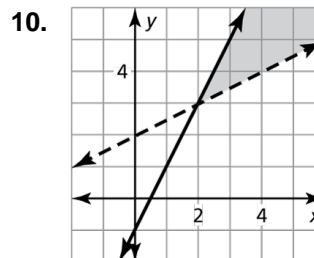
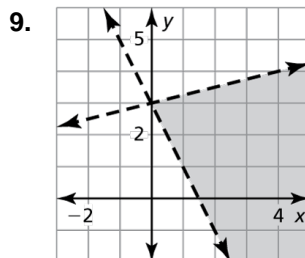
5.  $x - y < 3$   
 $-x - y \geq -1$

6.  $y \leq \frac{1}{3}x + 2$   
 $y > -\frac{1}{2}x + 5$

7.  $x > -2$   
 $y < 3$   
 $y \leq 2x - 1$

8.  $x + y > 4$   
 $x - y < -1$   
 $y > 7$

In Exercises 9 and 10, write a system of linear inequalities represented by the graph.



11. Describe and correct the error in graphing the system of inequalities.

✗

$y \geq \frac{1}{3}x - 2$

$y < -2x + 3$

✗

12. The points  $(1, 2)$ ,  $(5, 5)$ ,  $(1, 6)$  are the vertices of a shaded triangle.

- Write a system of linear inequalities represented by the shaded triangle.
- Find the area of the triangle.