

**Practice 6–5****Linear Inequalities**

Graph each linear inequality.

1.  $y \geq -4$

2.  $x + y < -2$

3.  $y < x$

4.  $x > 2$

5.  $4x + y > -6$

6.  $-3x + y \leq -3$

7.  $x + 4y \leq 8$

8.  $y > 2x + 6$

9.  $y > -x + 2$

10.  $2x + 3y < -9$

11.  $y \leq \frac{3}{7}x + 2$

12.  $4x + 2y < -8$

13.  $y \leq \frac{3}{4}x + 1$

14.  $x - y > 4$

15.  $y \geq -\frac{2}{5}x - 2$

16. Suppose your class is raising money for the Red Cross. You make \$5 on each basket of fruit and \$3 on each box of cheese that you sell. How many items of each type must you sell to raise more than \$150?

- Write a linear inequality that describes the situation.
- Graph the inequality.
- Write two possible solutions to the problem.

17. Suppose you intend to spend no more than \$60 buying books. Hardback books cost \$12 and paperbacks cost \$5. How many books of each type can you buy?

- Write a linear inequality that describes the situation.
- Graph the inequality.
- Write two possible solutions to the problem.

18. Suppose that for your exercise program, you either walk 5 mi/d or ride your bicycle 10 mi/d. How many days will it take you to cover a distance of at least 150 mi?

- Write a linear inequality that describes the situation.
- Graph the inequality.
- Write two possible solutions to the problem.

Write each linear inequality in slope–intercept form. Then graph the inequality.

19.  $6x - 4y > -16$

20.  $y \geq -\frac{1}{4}x - 3$

21.  $-5x + 4y < -24$

22.  $y < -5x + 6$

23.  $6x - 4y < -12$

24.  $y \geq \frac{9}{5}x + 7$

25.  $y > \frac{5}{7}x - 3$

26.  $y < -5x + 9$

27.  $-7x + 3y < -18$

28.  $y \geq \frac{6}{5}x - 8$

29.  $-12x + 8y < 56$

30.  $16x + 6y > 36$