

**Practice**

Form G

## Linear Inequalities

**Graph each linear inequality.**

1.  $x \geq -4$

2.  $y < 2$

3.  $3x - y \geq 6$

4.  $-4x + 5y < -3$

5.  $3x + 2y > 6$

6.  $y < x$

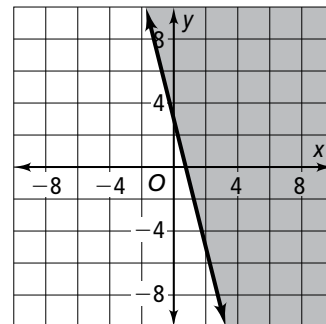
7.  $3x - 5y > 6$

8.  $x \leq \frac{y}{9}$

9.  $\frac{x}{4} < 4y - 3$

10. **Error Analysis** A student graphed  $y \leq -4x + 3$  as shown. Describe and correct the student's error.

11. **Writing** How do you decide which half-plane to shade when graphing an inequality? Explain.



**Practice** (continued)

Form G

## Linear Inequalities

**Determine whether the ordered pair is a solution of the linear inequality.**

12.  $7x + 2y > -5$ ,  $(-1, 1)$

13.  $x - y \leq 3$ ,  $(2, -1)$

14.  $y + 2x > 5$ ,  $(4, 1)$

15.  $x + 4y \leq -2$ ,  $(-8, -2)$

16.  $y < x + 4$ ,  $(-9, -5)$

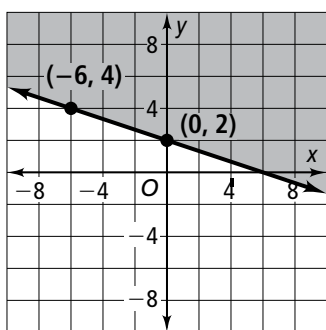
17.  $y < 3x + 2$ ,  $(3, 10)$

18.  $x - \frac{1}{2}y > 3$ ,  $(9, 12)$

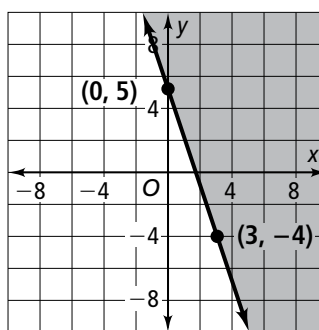
19.  $0.3x - 2.4y > 0.9$ ,  $(8, 0.5)$

**Write an inequality that represents each graph.**

20.



21.



22. You and some friends have \$30. You want to order large pizzas ( $p$ ) that are \$9 each and drinks ( $d$ ) that cost \$1 each. Write and graph an inequality that shows how many pizzas and drinks can you order?

23. Tickets to a play cost \$5 at the door and \$4 in advance. The theater club wants to raise at least \$400 from the play. Write and graph an inequality for the number of tickets the theater club needs to sell. If the club sells 40 tickets in advance, how many do they need to sell at the door to reach their goal?

24. **Reasoning** Two students did a problem as above, but one used  $x$  for the first variable and  $y$  for the second variable and the other student used  $x$  for the second variable and  $y$  for the first variable. How did their answers differ and which one, if either, was incorrect?