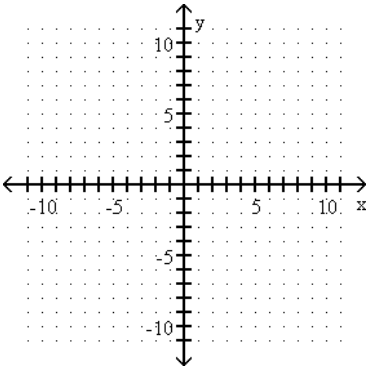
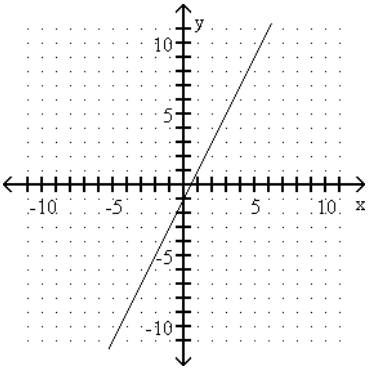
MIAMI DADE COLLEGE
INTERAMERICAN CAMPUS
MATHEMATICS DEPARTMENT
MAT1033
STUDY GUIDE : EQUATION OF THE LINE
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Graph the linear equation.

1) $2y = x - 1$



A)



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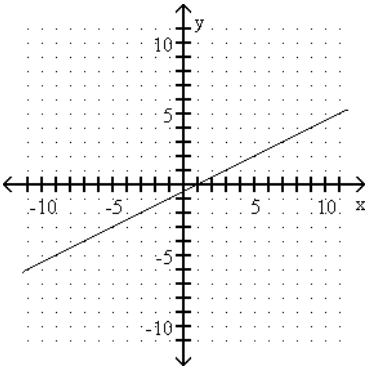

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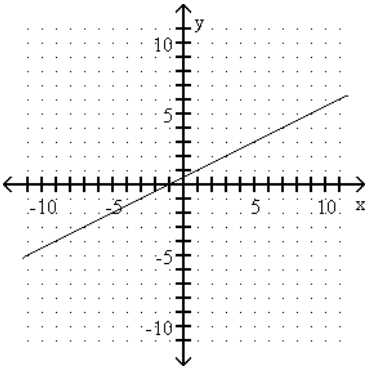
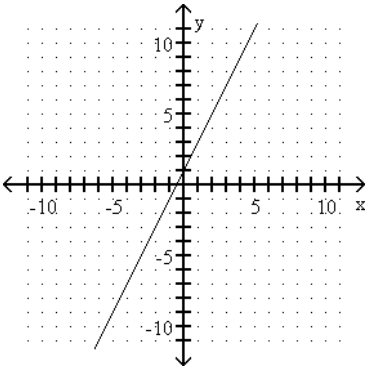
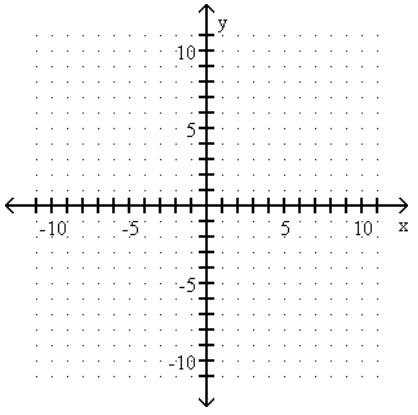


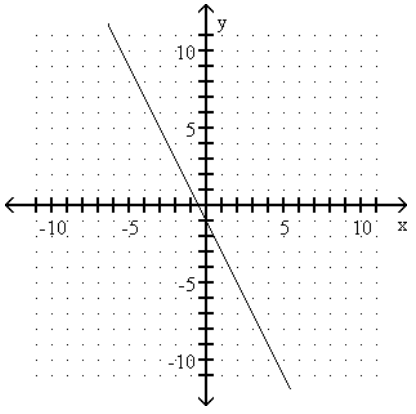
D)



2) -2x = y + 1



A)



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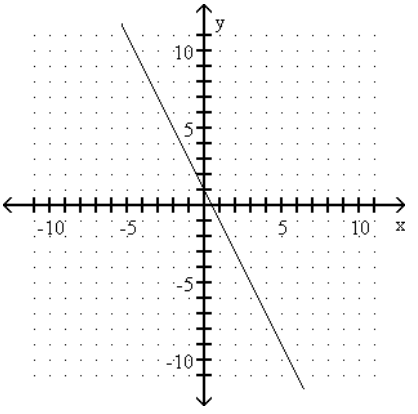

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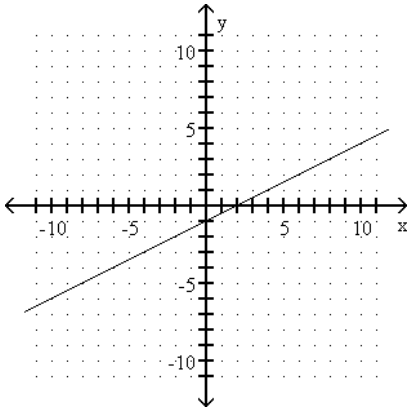

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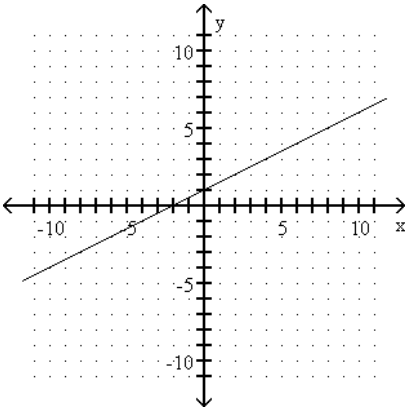


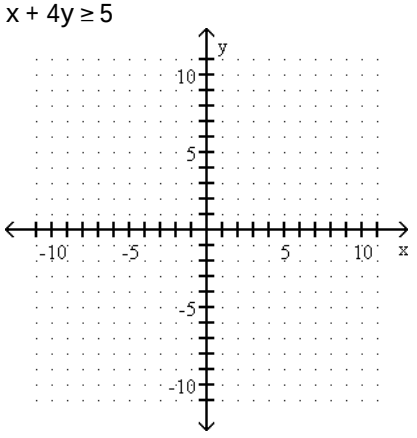
Write the slope-intercept form of the equation for the line passing through the given pair of points.

3) (-7, -8) and (-6, -8)

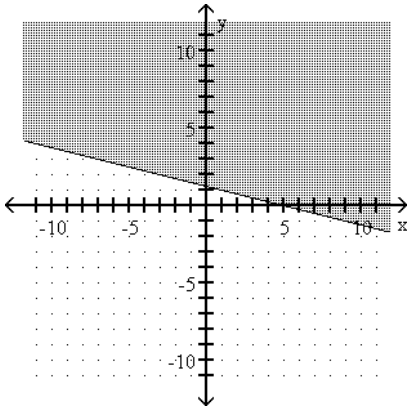
A) -6x - 7y = 0 B) x = -7 C) y = -8 D) -7x - 6y = 0

Graph the linear inequality.

4) $x + 4y \geq 5$



A)



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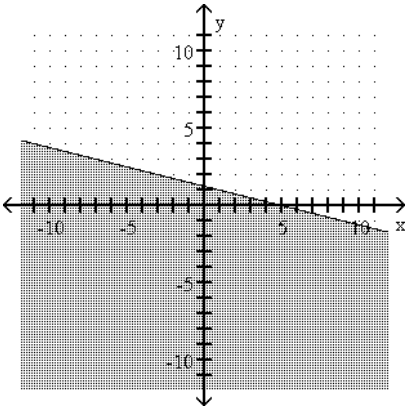

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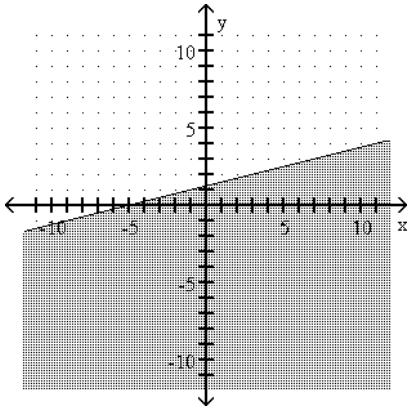

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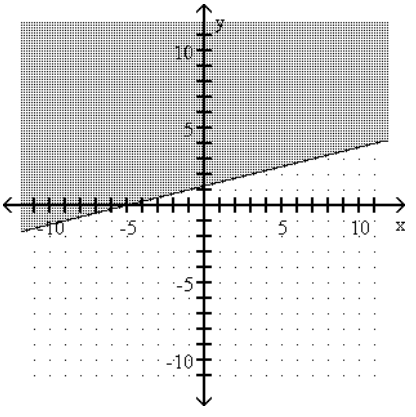
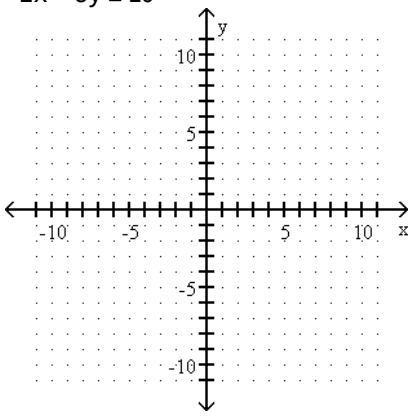
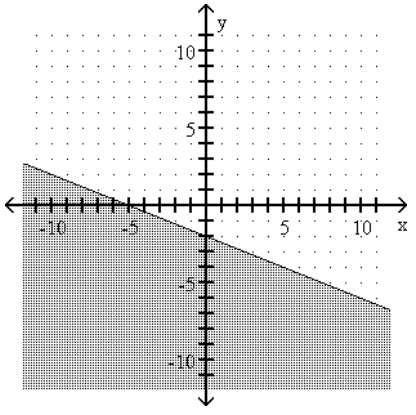


5) $-2x - 5y \leq 10$



A)



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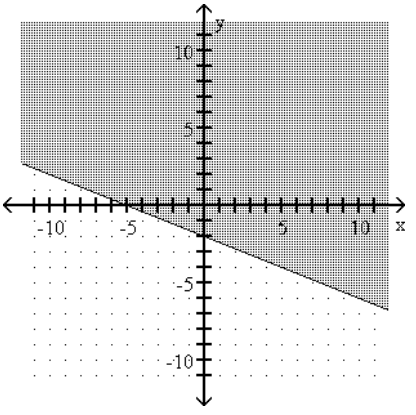

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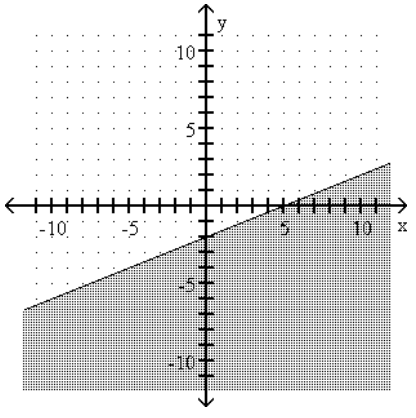

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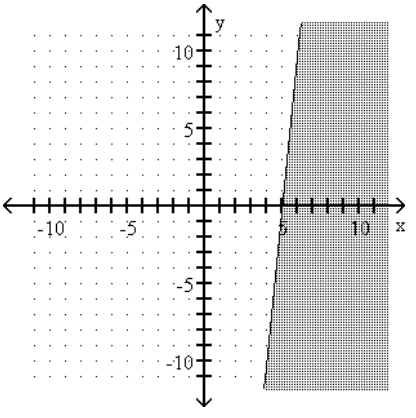
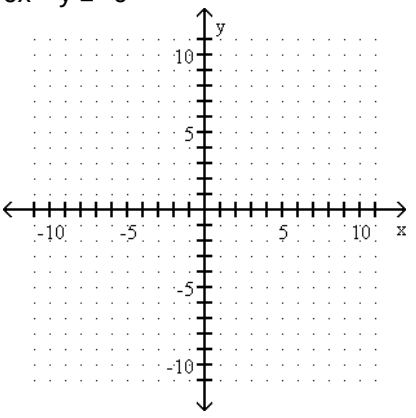
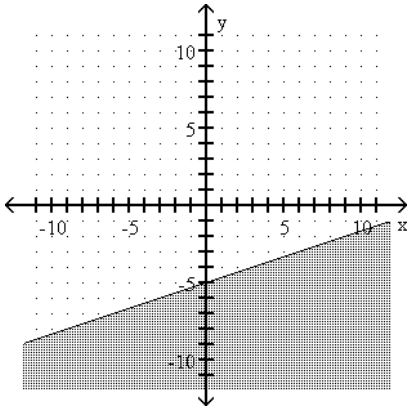


6) $3x + y \leq -5$



A)



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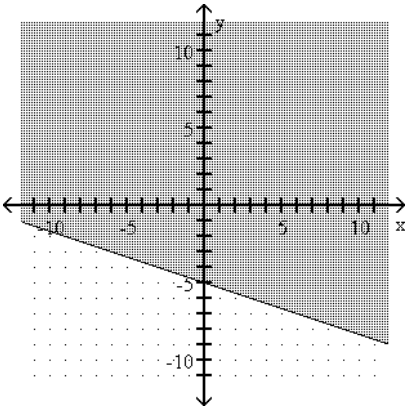

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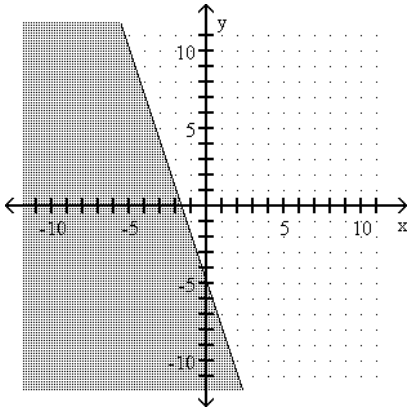

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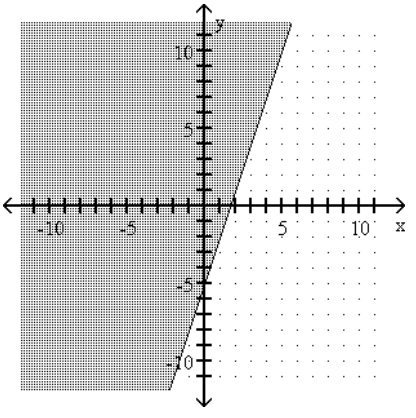


Write the slope-intercept form of the equation.

7) (-3, 1) and (0, 3)

A) $y = -\frac{4}{3}x + 3$ B) $y = \frac{4}{3}x + 3$ C) $y = \frac{2}{3}x + 3$ D) $y = -\frac{2}{3}x + 3$

8) Through (3, 5); m = - 2

A) $y = -2x + 11$ B) $y = -2x - 11$ C) $y = -\frac{1}{2}x + 11$ D) $y = -2x + \frac{1}{11}$

Write an equation of the line through the given point with the given slope. Write the equation in slope-intercept form.

9) (5, 5); $m = -\frac{3}{5}$

A) $y = -\frac{3}{5}x + 8$ B) $y = -\frac{5}{3}x - \frac{1}{8}$ C) $y = -\frac{3}{5}x + \frac{1}{8}$ D) $y = -\frac{3}{5}x - 8$

10) (0, 5); $m = -\frac{5}{7}$

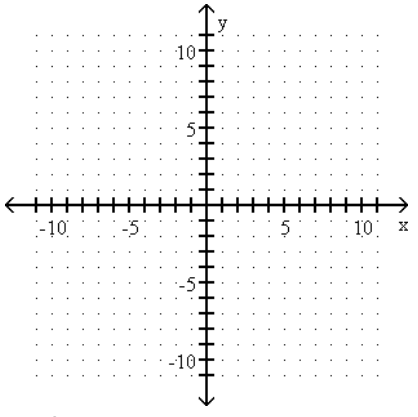
A) $y = -\frac{5}{7}x + \frac{1}{5}$ B) $y = -\frac{5}{7}x - 5$ C) $y = -\frac{7}{5}x + 5$ D) $y = -\frac{5}{7}x + 5$

11) (2, 5); $m = -\frac{2}{9}$

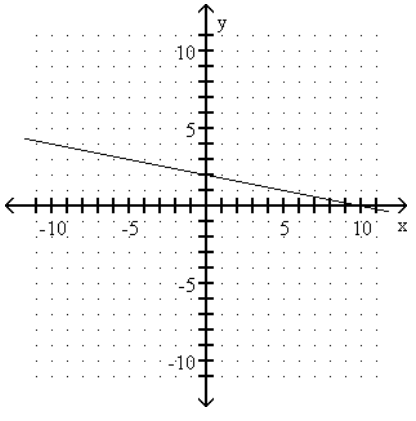
A) $y = -\frac{2}{9}x + \frac{9}{49}$ B) $y = -\frac{2}{9}x - \frac{49}{9}$ C) $y = -\frac{9}{2}x - \frac{9}{49}$ D) $y = -\frac{2}{9}x + \frac{49}{9}$

Graph the line.

12) Through (0, 2), $m = \frac{1}{5}$



A)



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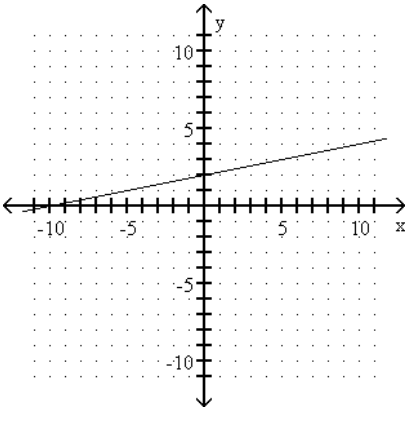

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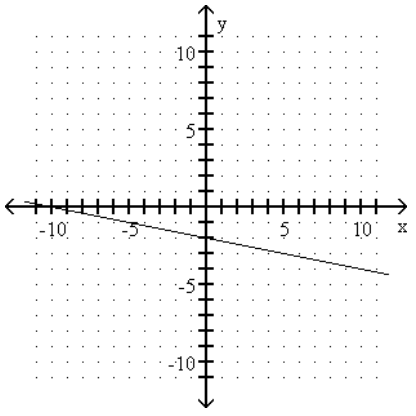
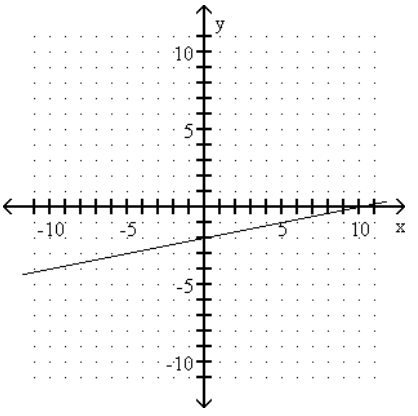


D)



Tell whether the pair of lines is "parallel", "perpendicular", or "neither."

13) $9x + 3y = 12$
$27x + 9y = 37$

A) Parallel B) Neither C) Perpendicular

Find the slope of the line.

14) $3x - 5y = 9$

A) $-\frac{9}{5}$ B) $-\frac{5}{3}$ C) $-\frac{3}{5}$ D) $\frac{3}{5}$

15) $-5y = -3x - 19$

A) $\frac{3}{5}$ B) $\frac{5}{3}$ C) $-\frac{3}{5}$ D) $-\frac{5}{3}$

16) $8x = 3y + 9$

A) $\frac{8}{3}$ B) $\frac{3}{8}$ C) $\frac{9}{8}$ D) $-\frac{8}{3}$

Complete the ordered pair for the equation.

17) $y = -3x - 13$ $(-6, \ )$

A) $(-6, 8)$ B) $(-6, -13)$ C) $(-6, 5)$ D) $(-6, -6)$

Find the slope of the line going through the given pair of points.

18) $\left(-\frac{1}{4}, -\frac{3}{10}\right)$ and $\left(0, -\frac{1}{5}\right)$

A) $\frac{4}{5}$ B) $\frac{2}{5}$ C) $\frac{5}{4}$ D) $\frac{5}{8}$

Decide whether or not the ordered pair is a solution to the equation.

19) $8x - 20y = 96$; $(2, -4)$

A) Yes B) No

Write an equation of the line with the given slope and y-intercept.

20) $m = \frac{5}{2}$; (0, -3)

A) $y = -\frac{5}{2}x + 3$ B) $y = \frac{5}{2}x + 3$ C) $y = -\frac{5}{2}x - 3$ D) $y = \frac{5}{2}x - 3$

Determine whether the graphs of the equations are parallel lines, perpendicular lines, or neither.

21) $y = 4x - 5$

$16x + 4y = 7$

A) Parallel B) Perpendicular C) Neither

Find the intercepts for the equation.

22) $-4x + 5y = 0$

A) (0, 0) (0, 0) B) (0, -1) (0, -4) C) (-1, 0) (-4, 0) D) (0, -4) (-1, 0)

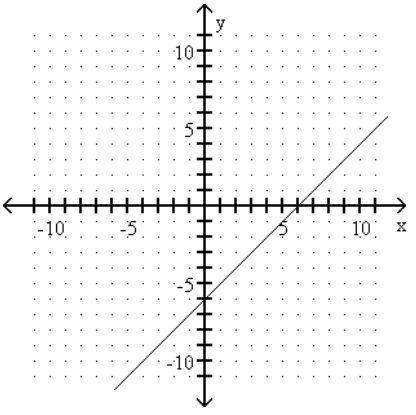
Find the slope of the line going through the pair of points.

23) (-6, -3), (-7, 8)

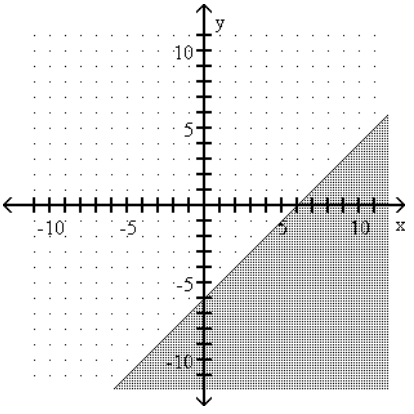
A) $\frac{1}{5}$ B) $-\frac{1}{11}$ C) 5 D) - 11

Complete the graph by shading the correct region.

24) $y \geq x - 6$



A)



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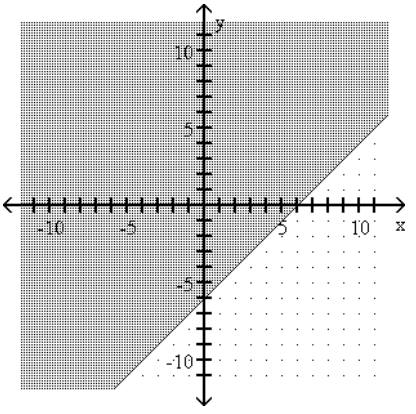

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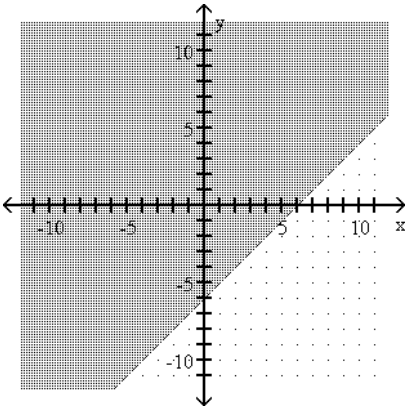
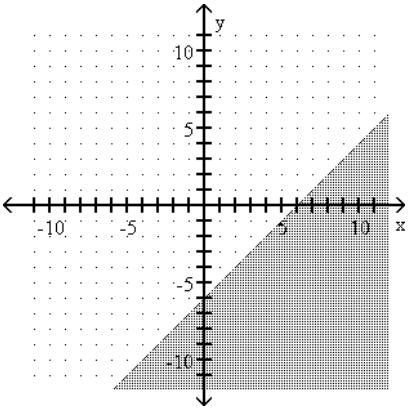


D)



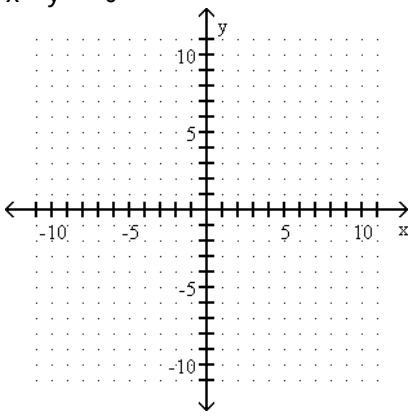
Find the intercepts for the graph of the equation.

25) $-2x + 2y = 6$

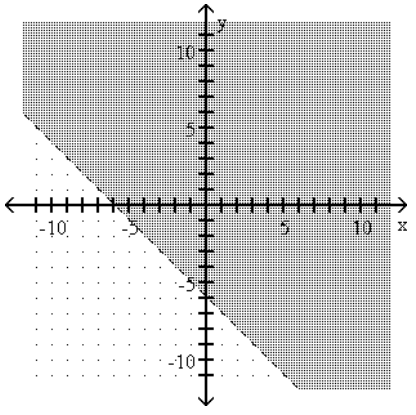
A) (0, -5) (0, -4) B) (-3, 0) (0, 3) C) (-3, -4) (-5, 6) D) (-5, 0) (-4, 0)

Graph the linear inequality.

26) $x + y < -6$



A)



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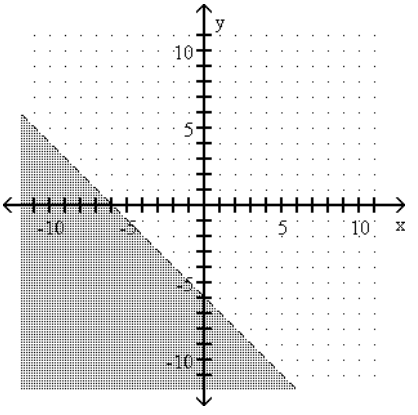

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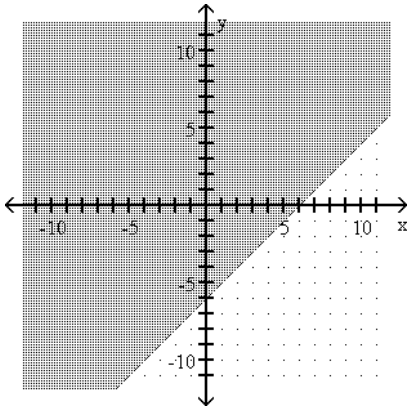

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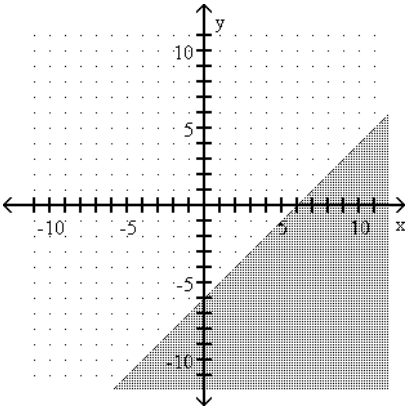


Tell whether or not the relation is a function.

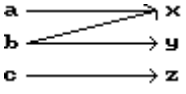
27) {(-2, -5), (2, 2), (5, 2), (8, -9), (10, -8)}

A) Yes

B) No

Is the following correspondence a function?

28) Domain Range

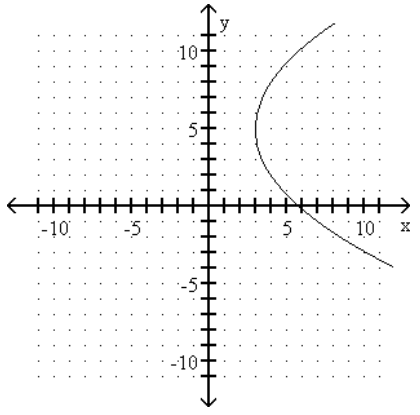


A) No

B) Yes

State whether the graph is or is not that of a function.

29)

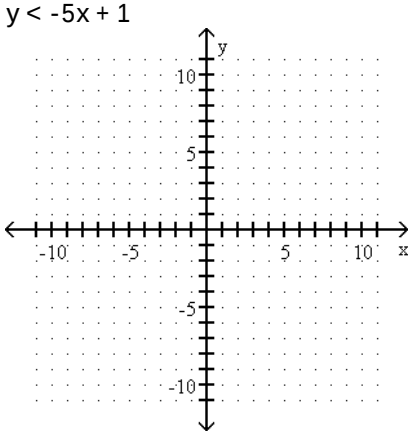


A) Function

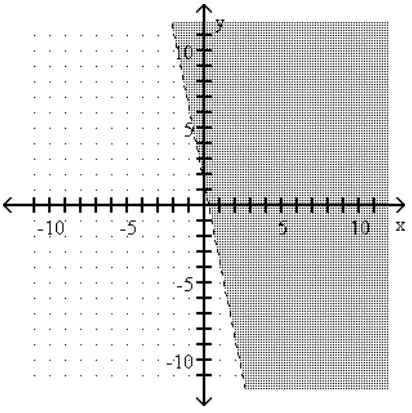
B) Not a function

Graph the linear inequality.

30) $y < -5x + 1$



A)



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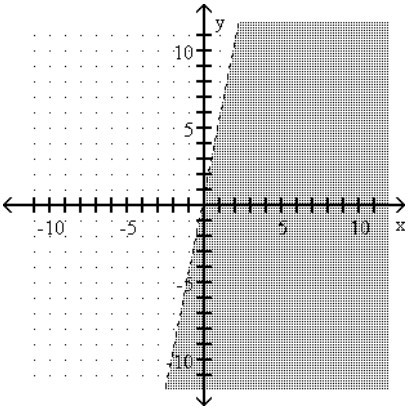

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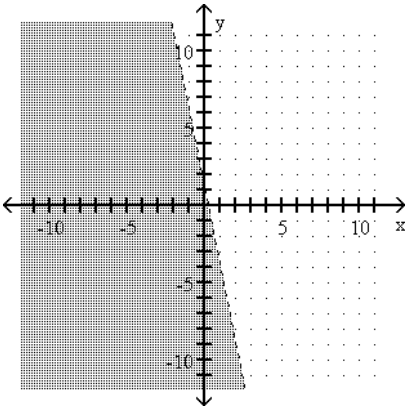

D)