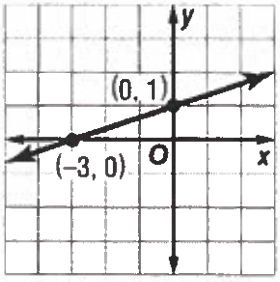
Name: KEY

3.3,4.1-4.3,5.6 practice

Write an equation of the line that passes through the given point and has the given slope.

1) 

$y = \frac{1}{3}x + 1$

OR

$y = \frac{1}{3}(x+3)$

OR

$y - 1 = \frac{1}{3}x$

2) (4, –5); slope $-\frac{1}{2}$

$y = -\frac{1}{2}x - 7$

OR

$y + 5 = \frac{1}{2}(x-4)$

3) The cost for 7 dance lessons is \$82. The cost for 11 lessons is \$122. Write a linear equation to find the total cost C for ℓ lessons. Then use the equation to find the cost of 4 lessons.

$C = 10\ell + 12$

$C = 10(4) + 12$

\$52

ℓ C

(7, 82)

(11, 122)

$\frac{122-82}{11-7}$ = rate

$\frac{40}{4}$ = rate

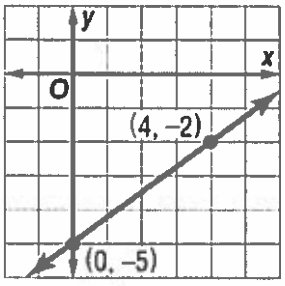
10 = rate

$y - 82 = 10(x-7)$

OR

$y = 10x + 12$

Write an equation in slope-intercept form given the information.

4) 

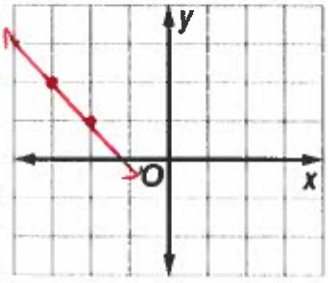
$y = \frac{3}{4}x - 5$

5) slope: –1, y-intercept –7

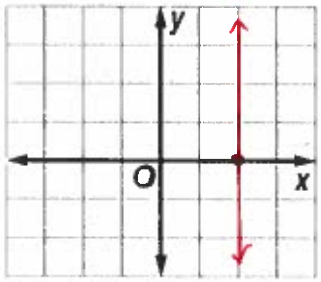
$y = -x - 7$

Graph each equation.

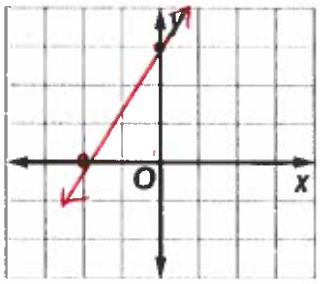
6) $y - 2 = -(x + 3)$ (–3, 2)



7) $2 = x$



8) $2y = 3x - 6$ $y = \frac{3}{2}x - 3$



9) Write an equation in point-slope form for a horizontal line that passes through (4, –2).

$y + 2 = 0(x-4)$

Write each equation in standard form.

10) $y + 2 = -3(x - 1)$

$y + 2 = -3x + 3$

$-2 \quad -2$

$y = -3x + 1$

$+3x \quad +3x$

$3x + y = 1$

11) $y - 1 = -\frac{1}{3}(x - 6)$

$y - 1 = -\frac{1}{3}x + 2$

$+1 \quad +1$

$y = -\frac{1}{3}x + 3$

$3\left[y = -\frac{1}{3}x + 3\right]$

$3y = -1x + 9$

$+1x \quad +1x$

$1x + 3y = 9$

Find the value of r so the line that passes through each pair of points has the given slope.

12) $(-2, r), (6, 7), m = \frac{1}{2}$

$\frac{r-7}{-2-6} = \frac{1}{2}$

$\frac{r-7}{-8} = \frac{1}{2}$

$2(r-7) = -8(1)$

$2r - 14 = -8$

$+14 \quad +14$

$2r = 6$

$r = 3$

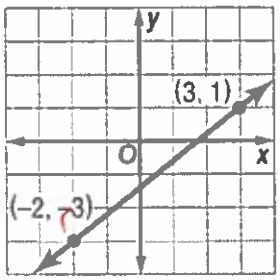
Find the slope of the line that passes through each pair of points.

13) $(3, 9), (-2, 8)$

$\frac{9-8}{3--2}$

$\frac{1}{5}$

14)



$\frac{4}{5}$

For 15-18, match the inequality to the graph.

15) $y - 2x < 2$ B

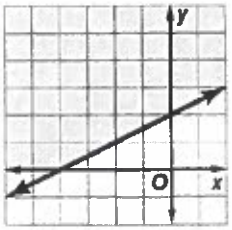
$y < 2x + 2$

16) $y \leq -3x$ D

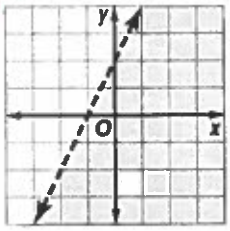
17) $2y - x \geq 4$ A

18) $x + y > 1$ C

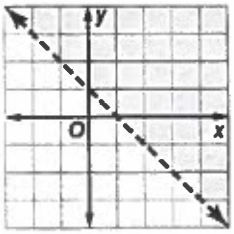
a.



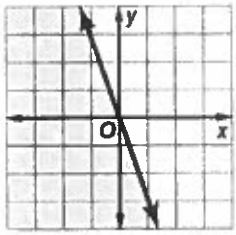
b.



c.



d.



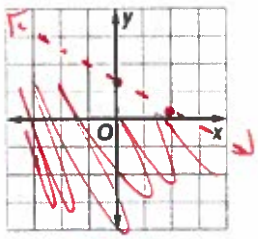
19) Graph $-2y - x > -3$

$+x \quad +x$

$-2y > x - 3$

$-2 \quad -2 \quad -2$

$y < -\frac{1}{2}x + \frac{3}{2}$



20) Determine which ordered pairs are part of the solution set for the inequality.

$3x + y \geq 6$, $\{(4, 3), (-2, 4), (-5, -3), (3, -3)\}$

Yes No No Yes