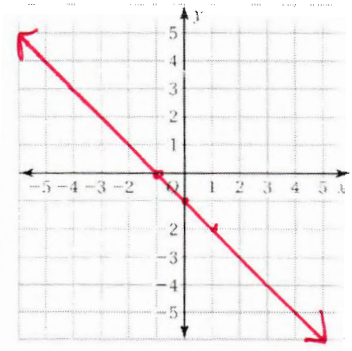
Name: Answers Period: _____

Review – Graphing Linear Equations and Finding Slope

Graph both linear equations on the coordinate plane on the right. Make sure you use an input/output table with at least 3 ordered pairs for each.

1) $y = -x - 1$

x	$y = -x - 1$	y
-1	$-(-1) - 1$	0
0	$-(0) - 1$	-1
1	$-(1) - 1$	-2

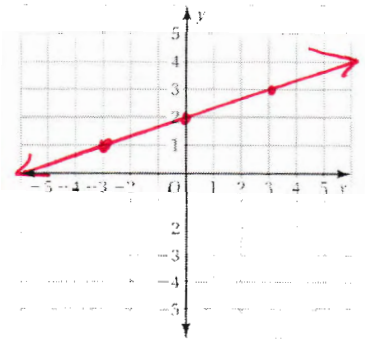


2) $y - 2 = \frac{1}{3}x$

$+2 \quad +2$

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

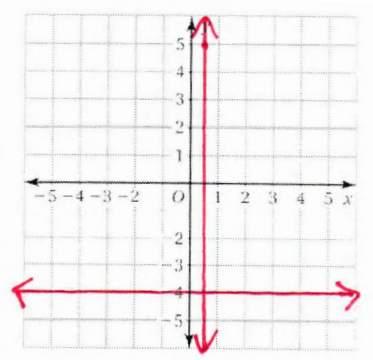
x	$y = \frac{1}{3}x + 2$	y
-3	$\frac{1}{3}(-3) + 2$	1
0	$\frac{1}{3}(0) + 2$	2
3	$\frac{1}{3}(3) + 2$	3



Graph both of the equations on the coordinate plane on the right. You may make an input/output table if you wish.

3) $y = -4$

4) $x = \frac{1}{2}$



5) ***Slope-intercept form*** is an equation written in the form $y =$ $mx + b$, where m represents the line's slope and b represents the line's y-intercept.

Solve each equation for y. Then determine the slope and y-intercept of the equation.

6) $2y = -4x + 2$

$\frac{2y}{2} = \frac{-4x+2}{2}$

$y = -2x + 1$

$m =$ -2 $b =$ $(0, 1)$

7) $x - 3y = 9$

$-x \quad -x$

$\frac{-3y}{-3} = \frac{-x+9}{-3}$

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

$m =$ $\frac{1}{3}$ $b =$ $(0, -3)$

8) $\frac{5}{2}\frac{2}{5}y = x \cdot \frac{5}{2}$

$y = \frac{5}{2}x$

$m =$ $\frac{5}{2}$ $b =$ $(0, 0)$

9) $-3x + \frac{1}{2}y = -6$

$+3x \quad +3x$

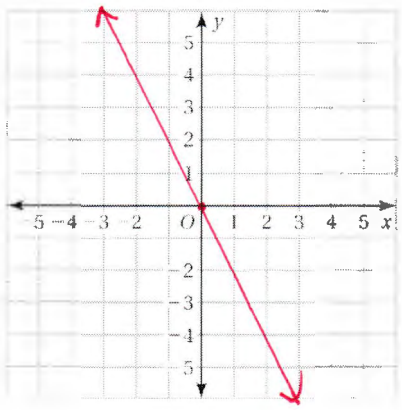
$2 \cdot \frac{1}{2}y = (3x - 6)2$

$y = 6x - 12$

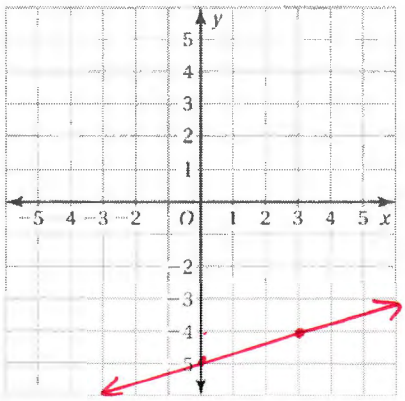
$m =$ 6 $b =$ $(0, -12)$

Graph each line using the given information about the slope and y-intercept.

10) $m = -2$ *and* $b = 0$

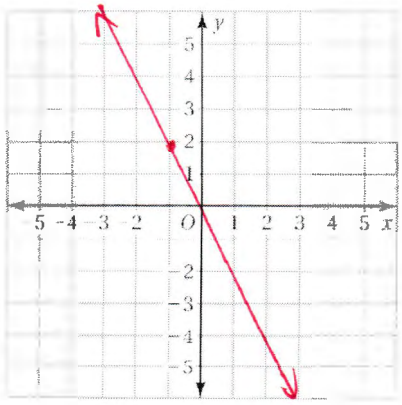


11) $m = \frac{1}{3}$ *and* $b = -5$



Graph each equation using the slope and the *y*-intercept only.

12) Graph $m = -2$ *and* $b = 0$

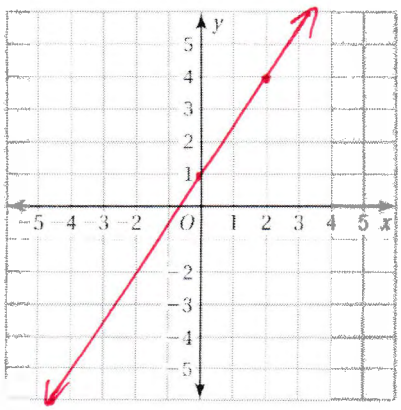


13) Change to slope intercept form and graph

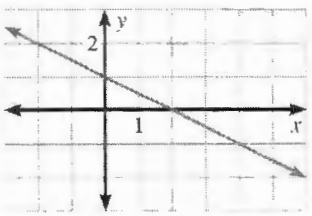
$3x - 2y = -2$

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

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

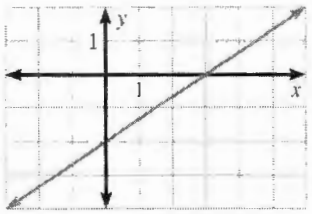


Identify the x-intercept and the y-intercept of the graph.

14) 

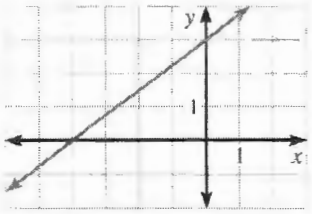
x-intercept : (2,0)

y-intercept : (0,1)

15) 

x-intercept : (3,0)

y-intercept : (0,-2)

16) 

x-intercept : (-4,0)

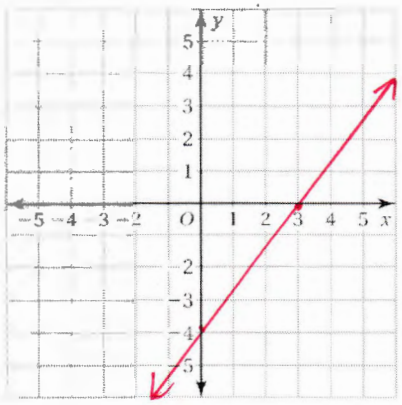
y-intercept : (0,3)

Find the x-intercept and the y-intercept of each equation, and then graph it.

17) $-4x+3y=-12$

x-intercept : (+3,0)

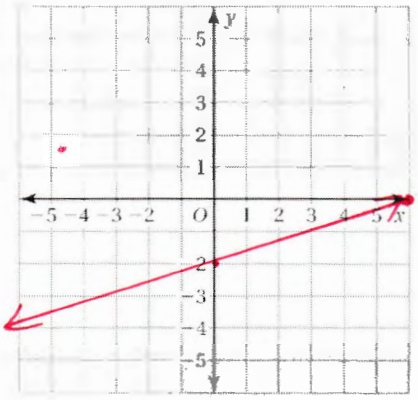
y-intercept : (0,-4)



18) $5x-15y=30$

x-intercept : (6,0)

y-intercept : (0,-2)



Find the slope of a line that passes through the given points.

19) $(-2,-2)$ *and* $(3,-1)$

$m=\frac{-1+2}{3--2}$

$=\boxed{\frac{1}{5}}$

20) $(-3,1)$ *and* $(-1,5)$

$m=\frac{5-1}{-1+3}$

$=\frac{4}{2}=\boxed{2}$

21) $(-3,12)$ *and* $(-3,0)$

$\frac{0-12}{-3--3}=\frac{-12}{0}$

Undefined

Solve the equation.

22) $\frac{3}{4}c+3-\frac{1}{4}c=7$

$\frac{2}{4}c+3=7$

$\frac{1}{2}c+3=7$

$-3 \quad -3$

$2\cdot\frac{1}{2}c=4\cdot 2$

$\boxed{c=8}$

23) $5(2-y)+y=-6$

$10-5y+y=-6$

$10-4y=-6$

$-10 \quad -10$

$\frac{-4y}{-4}=\frac{-16}{-4}$

$\boxed{y=4}$

24) $6x-3(x+8)=9$

$6x-3x-24=9$

$3x-24=9$

$+24 \quad +24$

$\frac{3x}{3}=\frac{33}{3}$

$\boxed{x=11}$

Show whether the given ordered pair is a solution of the equation. *Show your work!*

25) $y=3x+4$; $(-1,1)$

$1=3(-1)+4$

$1=-3+4$

$1=1$

Yes

26) $2x-3y=15$; $(0,5)$

$2(0)-3(5)=15$

$0-15=15$

$-15\neq 15$

No

27) $y=6-0.5x$; $(3,4.5)$

$4.5=6-0.5(3)$

$4.5=6-1.5$

$4.5=4.5$

Yes

28) $y=-\frac{3}{4}x+3$; $(-8,-3)$

$-3=\frac{-3}{4}\left(\frac{-8}{1}\right)+3$

$-3=6+3$

$-3\neq 9$

No