Name Key Date 10-30-09 Period

Review -Test 10-30-2009

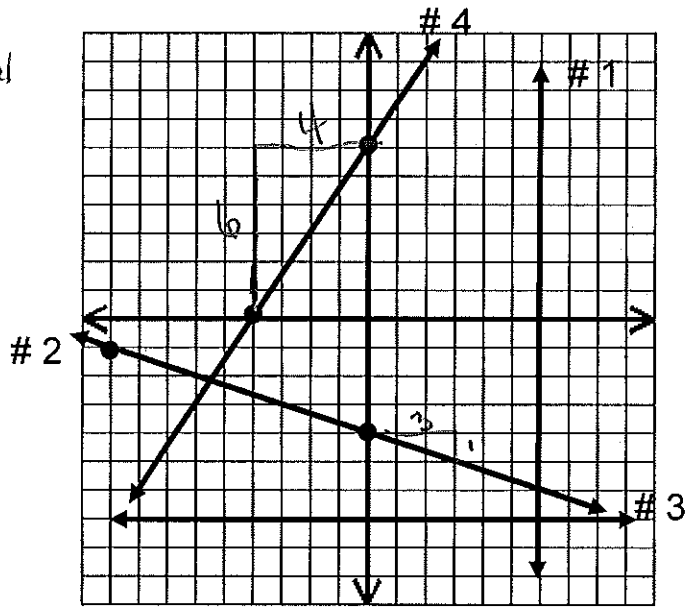
Find the slope of each line below.

6. Line # 1: NONE vertical line

7. Line # 2: $-\frac{1}{3}$

8. Line # 3: zero horizontal line

9. Line # 4: $\frac{6}{4} = \frac{3}{2}$



Find the slope of the line through the given points. $m = \frac{y_2 - y_1}{x_2 - x_1}$

10. P(x_1 y_1 4,5) and Q(x_2 y_2 -4,-2)

m= $\frac{7}{8}$

$m = \frac{-2-5}{-4-4} = \frac{-7}{-8}$

11. P(x_1 y_1 4,1) and Q(x_2 y_2 -3,5)

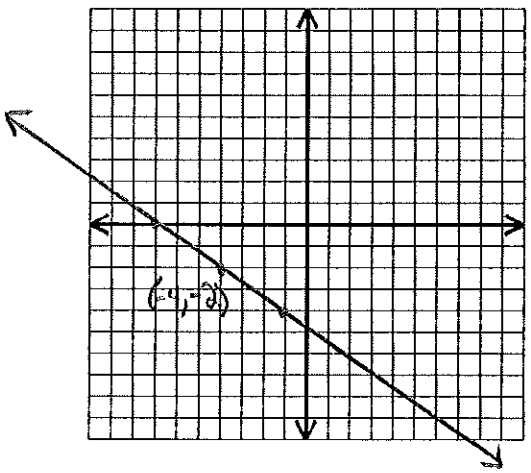
m= $-\frac{4}{7}$

$m = \frac{5-1}{-3-4} = \frac{4}{-7}$

Graph the following lines.

12. Through the point (-4,-2) with (← start at this point)

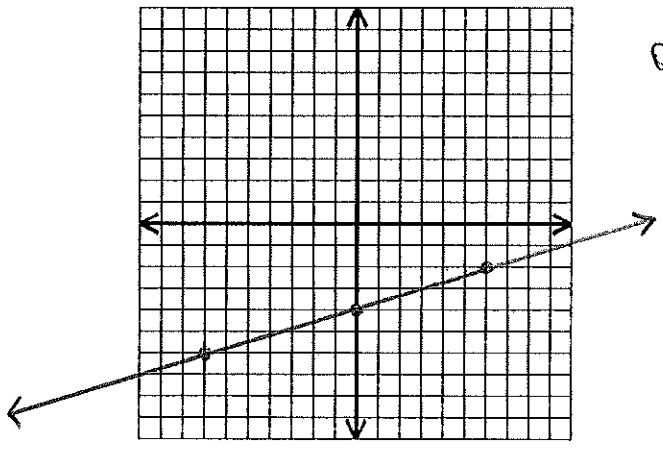
a slope m = $-\frac{2}{3}$



13. $y = \frac{2}{7}x - 4$ m= $\frac{2}{7}$ b= -4

$y = mx + b$

(↑ start here on y-axis)



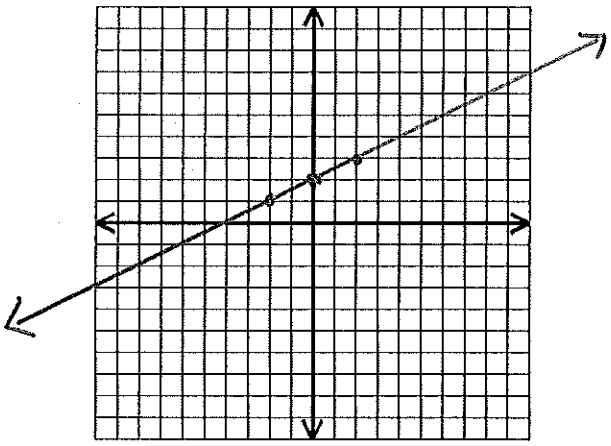
solve for y

14. $2x - 4y = -8$ m= $\frac{1}{2}$ b= 2

$-2x \quad -2x$

$\frac{-4y}{-4} = \frac{-2x}{-4} - \frac{8}{-4}$

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

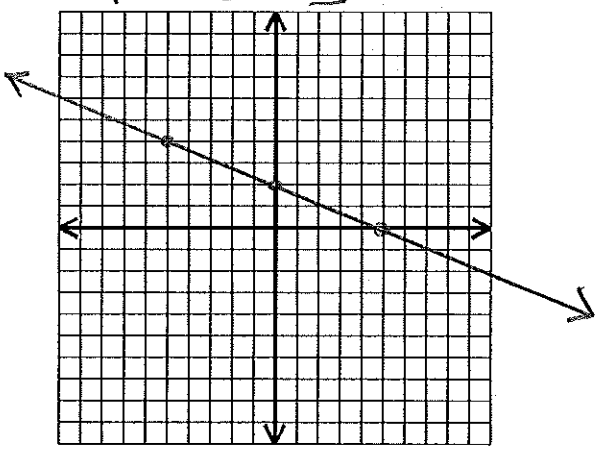


15. $2x + 5y = 10$ m= $-\frac{2}{5}$ b= 2

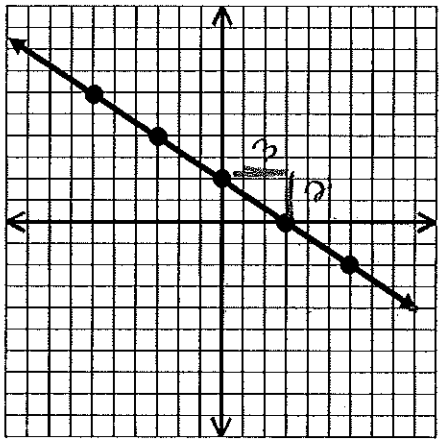
$-2x \quad -2x$

$\frac{5y}{5} = \frac{-2x}{5} + \frac{10}{5}$

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



Use the graph below to answer the following questions.



16. What is the slope of the line? $-\frac{2}{3}$

17. What is the y-intercept of the line? 2

18. What is the equation of the line? $y = -\frac{2}{3}x + 2$

19. What is the value of "y" when x = 6? -2

20. What is the value of "x" when y = -4? 9

21. If **$f(x) = 2x^2 + 1$**, find the **range** if the domain is **D**$= \{-2, 0, 3\}$. R= $\{9, 1, 19\}$

x	y
-2	9
0	1
3	19

$2(-2)^2 + 1 = 2(4) + 1$

$2(0)^2 + 1 = 1$

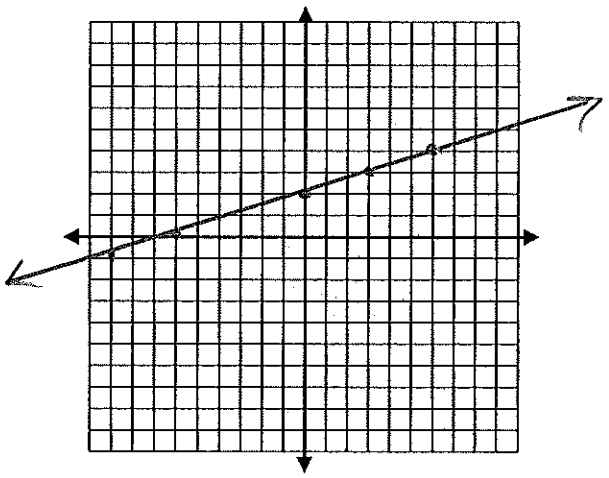
$2(3)^2 + 1 = 19$

Given the following x-values, find the corresponding y-values. Then graph the function.

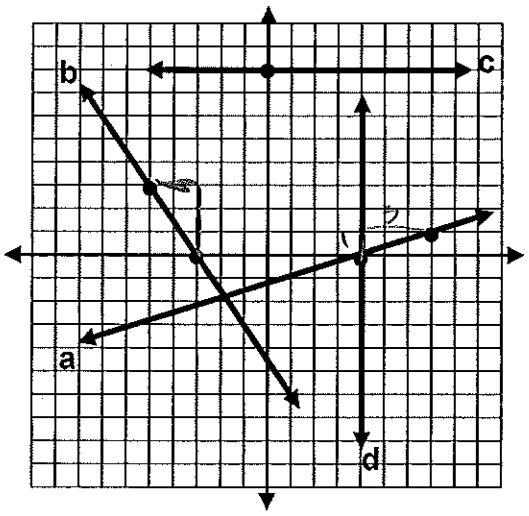
1. $h(x) = \frac{1}{3}x + 2$ $x = \{-9, -6, 0, 3, 6\}$

x	$h(x) = \frac{1}{3}x + 2$	y
-9	$\frac{1}{3}(-9)+2$	-1
-6	$\frac{1}{3}(-6)+2$	0
0	$\frac{1}{3}(0)+2$	2
3	$\frac{1}{3}(3)+2$	3
6	$\frac{1}{3}(6)+2$	4

x	y
-9	-1
-6	0
0	2
3	3
6	4



State the slope of each line.



1. slope of **a** = 1/3
2. slope of **b** = −3/2
3. slope of **c** = zero
4. slope of **d** = none

Find the slope of a line through the following points.

5. $(\overset{x_1}{2},\overset{y_1}{3})$ and $(\overset{x_2}{6},\overset{y_2}{9})$ $m = \frac{y_2 - y_1}{x_2 - x_1}$ m = $\frac{6}{4} = \frac{3}{2}$

$m = \frac{9-3}{6-2} = \frac{6}{4}$

Determine the value of r so that the line through the given points has the indicated slope.

6. $(\overset{x_1}{-2},\overset{y_1}{4})$, $(\overset{x_2}{r},\overset{y_2}{5})$, $m = \frac{1}{5}$ $m = \frac{y_2 - y_1}{x_2 - x_1}$ r = 3

$\frac{1}{5} = \frac{5-4}{r+2} \Rightarrow \frac{1}{5} = \frac{1}{r+2}$

$5(1) = 1(r+2)$

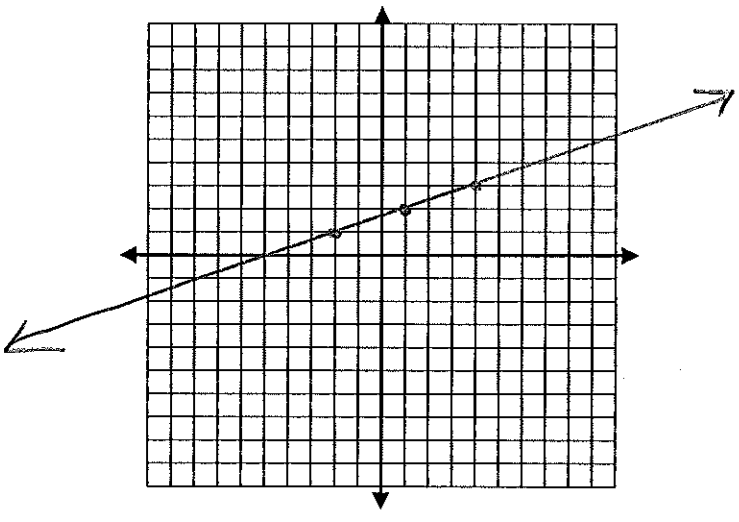
$5 = r + 2$

$-2 \quad -2$

$r = 3$

Through the given point, draw a line with the given slope.

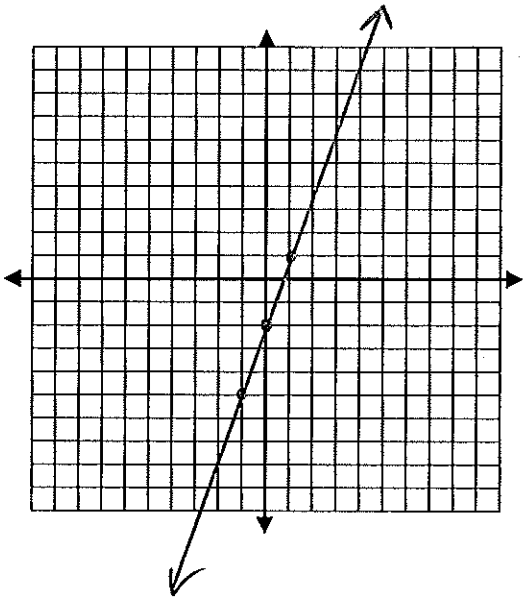
7. (1,2); slope = $\frac{1}{3}$



State the slope and the y-intercept, then graph the line.

8. $y = 3x - 2$

m = 3, b = -2



9. $x - 2y = 8$

$-x \quad -x$

m = 1/2, b = -4

$\frac{-2y}{-2} = \frac{-x}{-2} + \frac{8}{-2}$

$y = \frac{1}{2}x - 4$