Name _____ Date _____

Math 8R Period _____

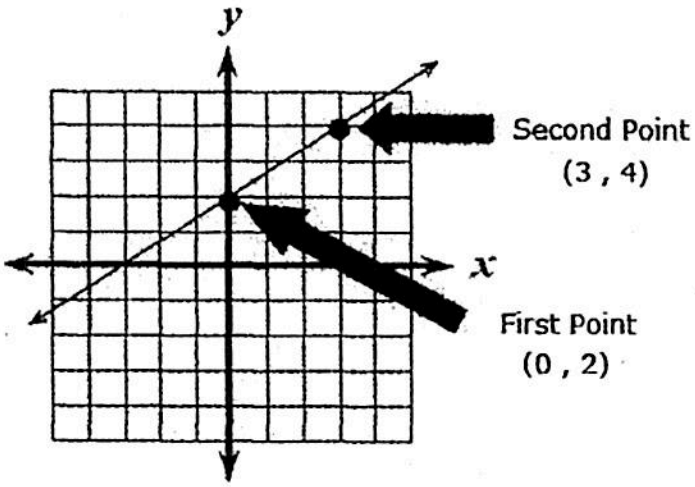
Graphing Test Review

1. What is the y-intercept of the line whose equation is, $y = 5x - 2$?

2. Complete the ordered pairs in the table for the equation, $y = -x + 8$.

x	3	8	0.5
y			

3. What is the equation of the line graphed below?

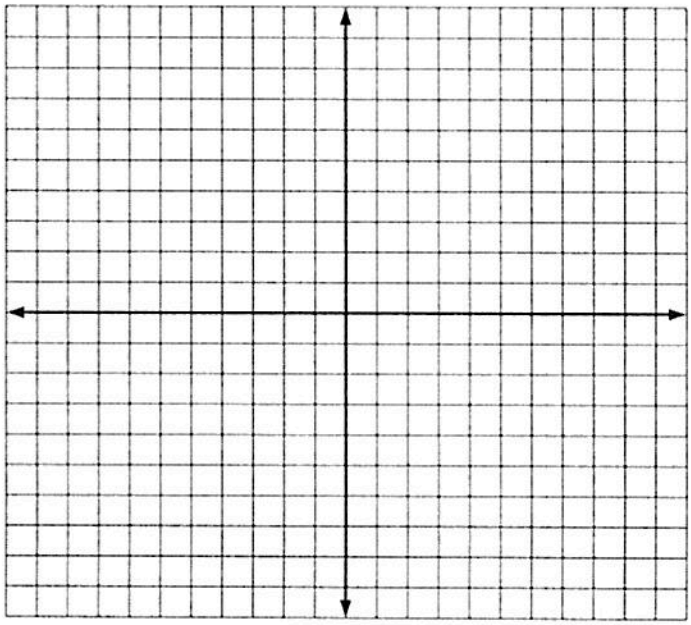


4. Which is the rule for the function table?

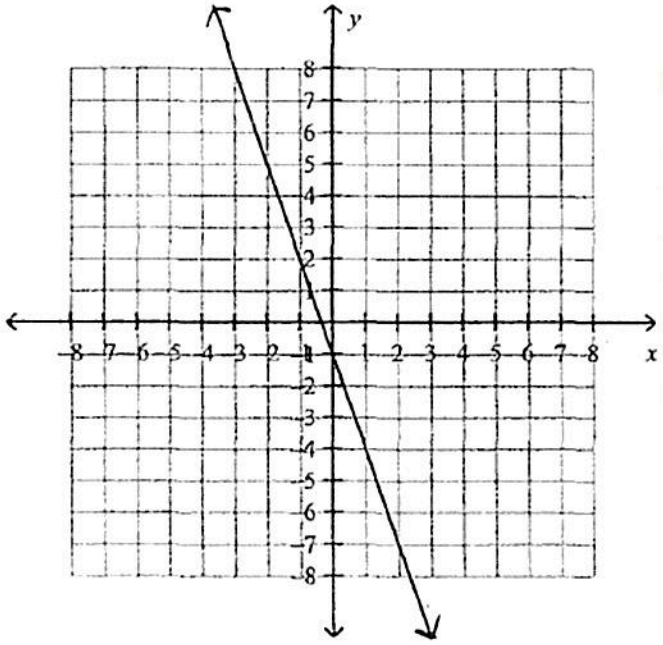
x	-1	0	1	2
y	4	7	10	13

a. $y = x + 5$
b. $y = 2x + 8$
c. $y = x + 11$
d. $y = 3x + 7$

5. Graph the linear function, $y = 2x - 4$



6. Write a rule for the linear function.



a. $f(x) = -3x^2 + 1$
b. $f(x) = 3x - 1$
c. $f(x) = 3x + 1$
d. $f(x) = -3x - 1$

8. Which equation represents the values in the table?

x	-1	0	1	2	3
y	5	7	9	11	13

a. $y = 2x + 8$
b. $y = 2x + 7$
c. $y = 3x + 7$
d. $y = 2x - 7$

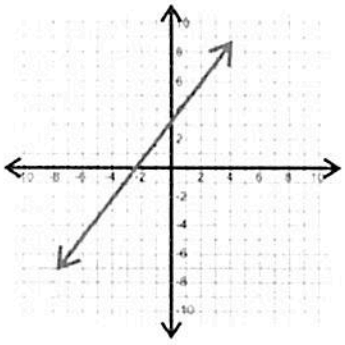
7. Find an ordered pair that satisfies the function, $y = -3x - 10$.

a. (1, -10)
b. (-1, -7)
c. (-1, 7)
d. (0, 10)

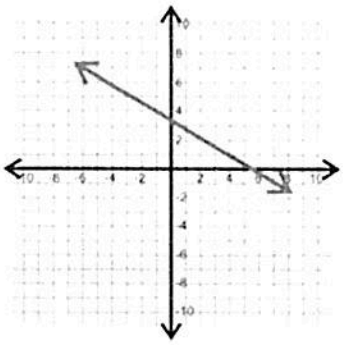
9. Find the slope of the line that passes through (1, 2) and (2, 4).

a. 2
b. $\frac{1}{2}$
c. 1
d. $\frac{3}{2}$

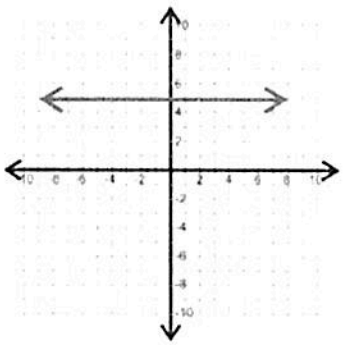
10. Determine the type of slope each line has.



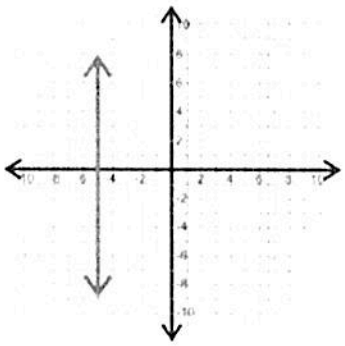
a. _____



b. _____



c. _____



d. _____

11. Find the output for each input.

$$y = -9x + 15$$

Input	Rule	Output
x	$y = -9x + 15$	y
-5		
1		
3		

12. Rewrite the equation $y - 6x = 12$ in slope-intercept form. Then find the slope and y-intercept of the graph of the equation.

m = _____

b = _____

13. Rewrite the equation $2y + 5x = 12$ in slope-intercept form. Then find the slope and y-intercept of the graph of the equation.

m = _____

b = _____

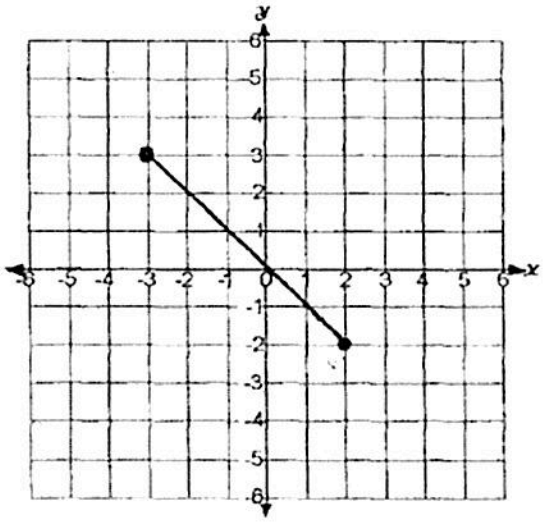
14. Find the slope-intercept form of the line that passes through the point (-2, 3) and has a slope of 5.

15. Find the slope-intercept form of the line that passes through the point (-2, 1) and has a slope of -3.

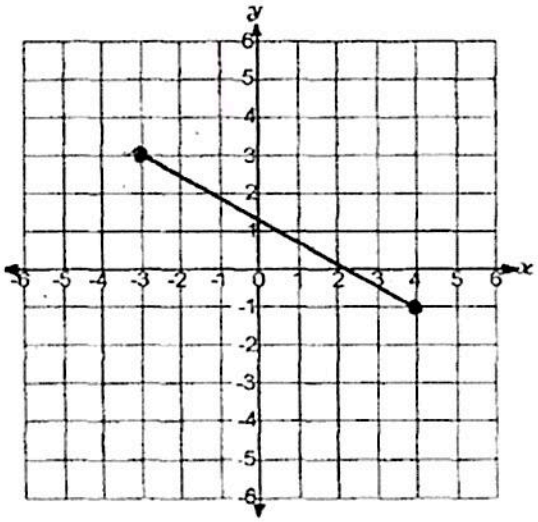
17. What is the slope of the line whose equation is, $y = 3x + 7$?

18. What is the equation of a line whose slope is 2 and y-intercept is (0, 8)?

16. Approximate the length of the line to the nearest tenth.

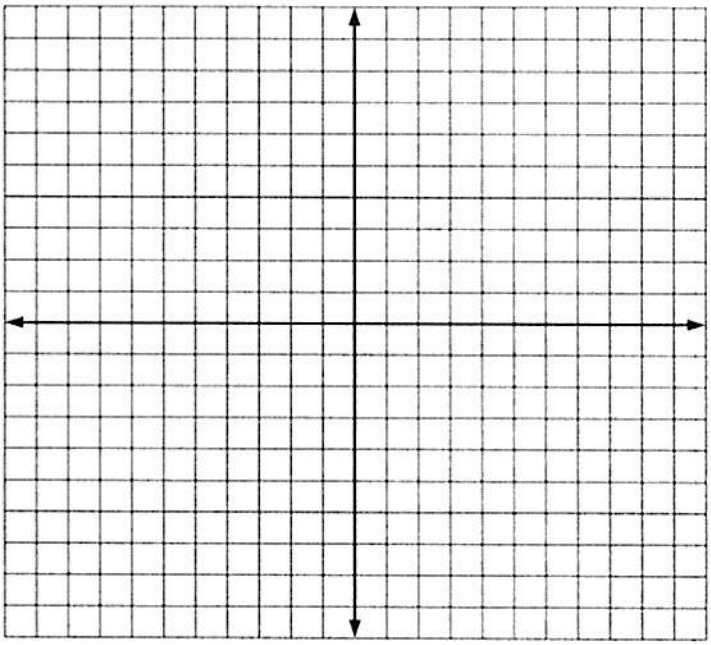


19. Approximate the length of the line to the nearest tenth.



20. Graph the equation $4x + 2y = 6$

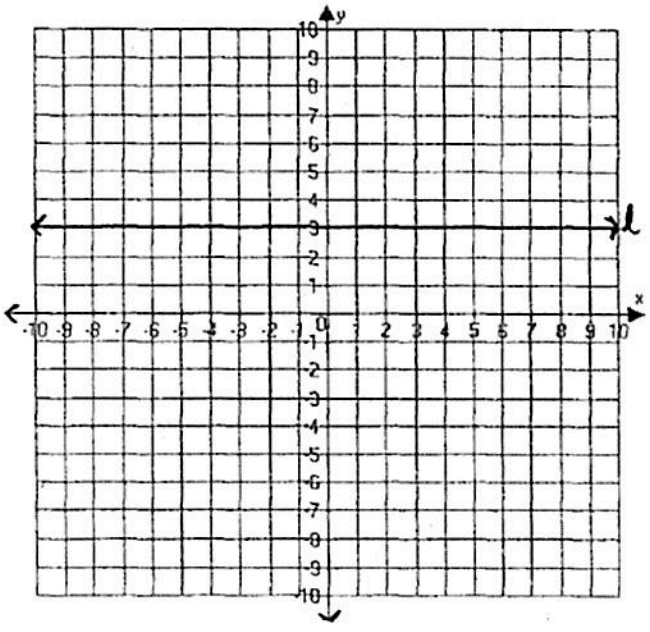
Solve: $4x + 2y = 6$



m = _____

b = _____

21. What is the equation of the line graphed below?



22. What is the equation of a line that passes through the points (3, 4) and (2, 6)?

23. Solve the given system of equations graphically.

$$y = x + 3$$
$$y = 2x + 1$$

$y = x + 3$

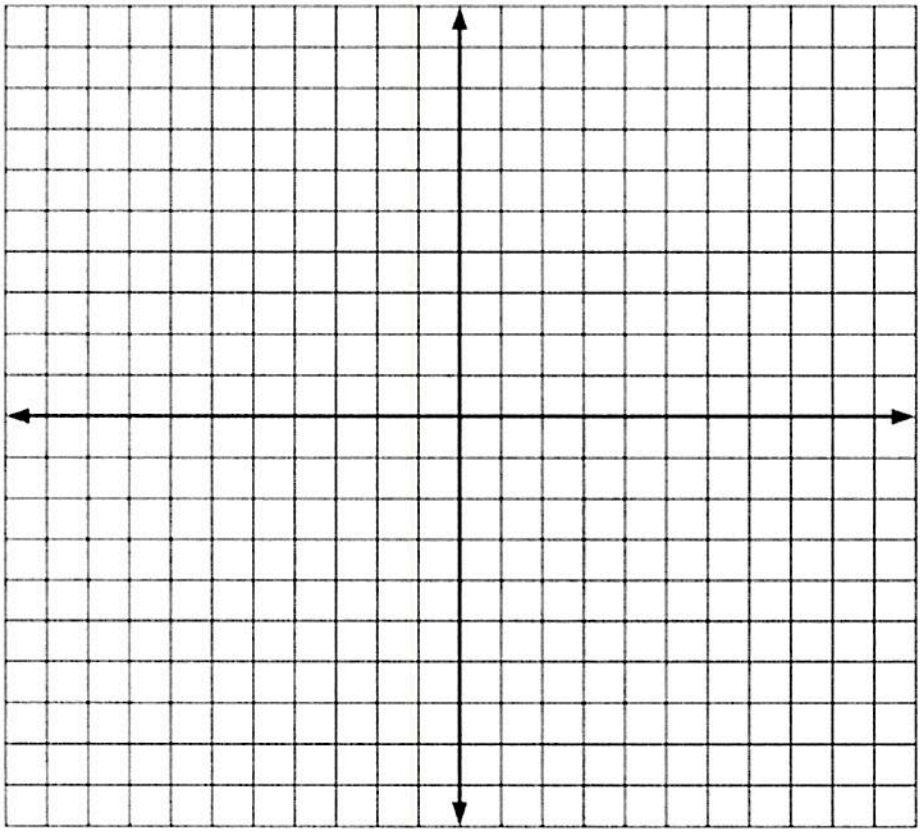
slope (m): _____

y-intercept (b): _____

$y = 2x + 1$

slope (m): _____

y-intercept (b): _____



Solution point: _____

Name of the system: _____

Name Key

Math 8R

Date _____

Period _____

Graphing Test Review

1. What is the y-intercept of the line whose equation is, $y = 5x - 2$?

$b = -2$

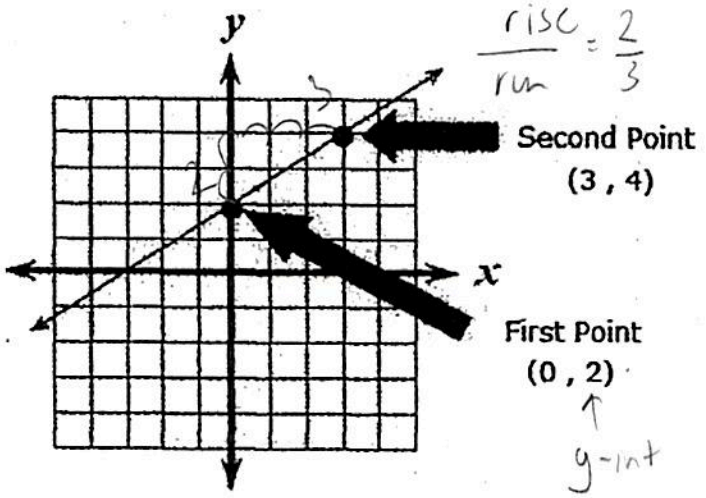
Coordinate: $(0, -2)$

2. Complete the ordered pairs in the table for the equation, $y = -x + 8$.

x	3	8	0.5
y	5	0	7.5

$y = -3 + 8$, $y = 5$ | $y = -8 + 8$, $y = 0$ | $y = -0.5 + 8$, $y = 7.5$

3. What is the equation of the line graphed below?



$\frac{rise}{run} = \frac{2}{3}$

$y = mx + b$

$m = \frac{2}{3}$

$b = 2$

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

4. Which is the rule for the function table? → equation

x	-1	0	1	2
y	4	7	10	13

$y = mx + b$

$m = 3$

$b = 7$

y-int

$(-1, 4)$ $(0, 7)$

x_1, y_1 x_2, y_2

a. $y = x + 5$

b. $y = 2x + 8$

c. $y = x + 11$

d. $y = 3x + 7$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$m = \frac{7 - 4}{0 - (-1)}$

$m = \frac{3}{1} = 3$

$(-1, 4)$ x y

$y = mx + b$

$4 = 3(-1) + b$

$4 = -3 + b$

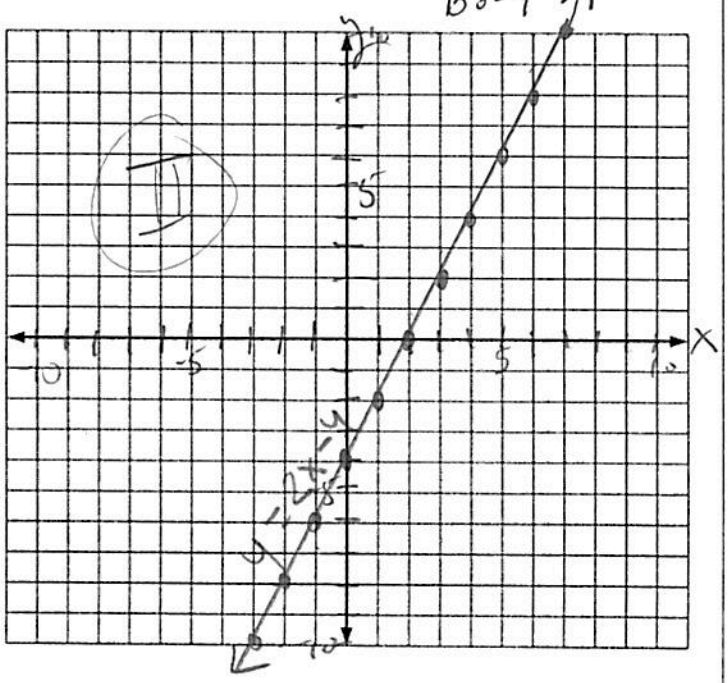
$+3 \quad +3$

$7 = b$

5. Graph the linear function, $y = 2x - 4$

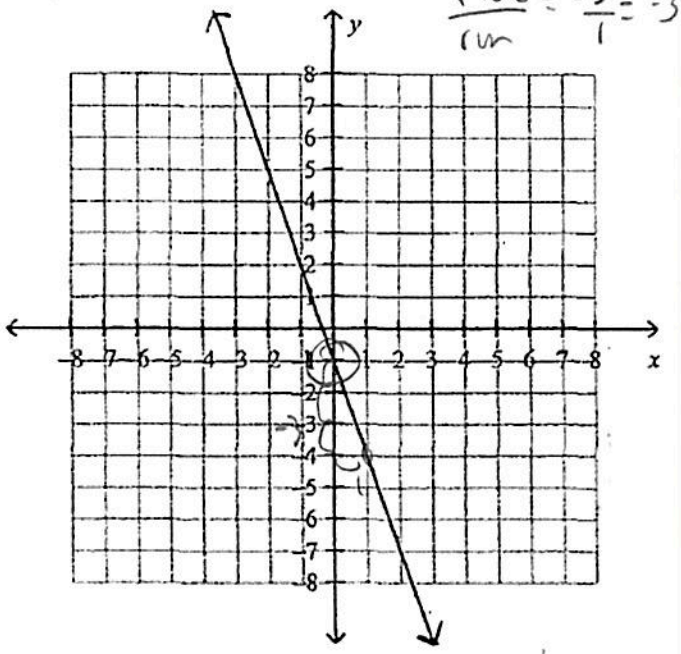
$m = \frac{2}{1}$ ↑ →

$B = -4$



equation $f(x) = y$

6. Write a rule for the linear function.



$\frac{\text{rise}}{\text{run}} = \frac{-3}{1} = -3$

$y = mx + b$

$m = -3$

$b = -1$

a. $f(x) = -3x^2 + 1$
b. $f(x) = 3x - 1$
c. $f(x) = 3x + 1$
d. $f(x) = -3x - 1$

8. Which equation represents the values in the table?

x	-1	0	1	2	3
y	5	7	9	11	13

a. $y = 2x + 8$
b. $y = 2x + 7$
c. $y = 3x + 7$
d. $y = 2x - 7$

$y = mx + b$
$m = 2$
$b = 7$

$(-1, 5)(0, 7)$
$x_1, y_1 \quad x_2, y_2$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$m = \frac{7 - 5}{0 - (-1)}$

$m = \frac{2}{1}$

$m = 2$

$(-1, 5)$
x, y

$y = mx + b$
$5 = 2(-1) + b$
$5 = -2 + b$
$+2 \quad +2$
$7 = b$

7. Find an ordered pair that satisfies the function, $y = -3x - 10$.

a. (1, -10)
b. (-1, -7)
c. (-1, 7)
d. (0, 10)

$(1, -10)$
$y = -3x - 10$
$-10 = -3(1) - 10$
$-10 = -3 - 10$
$-10 \neq -13$

$(-1, -7)$
$y = -3x - 10$
$-7 = -3(-1) - 10$
$-7 = 3 - 10$
$-7 = -7$ ✓

9. Find the slope of the line that passes through (1, 2) and (2, 4).

$x_1, y_1 \quad x_2, y_2$

a. 2
b. $\frac{1}{2}$
c. 1
d. $\frac{3}{2}$

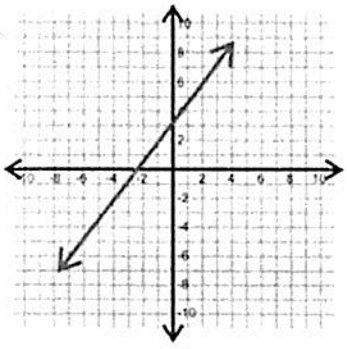
$m = \frac{y_2 - y_1}{x_2 - x_1}$

$m = \frac{4 - 2}{2 - 1}$

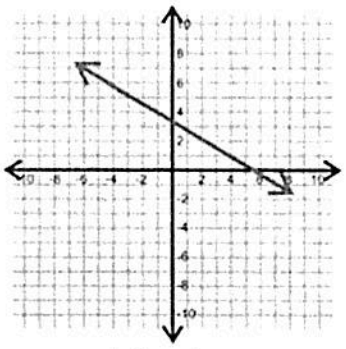
$m = \frac{2}{1}$

$m = 2$

10. Determine the type of slope each line has.

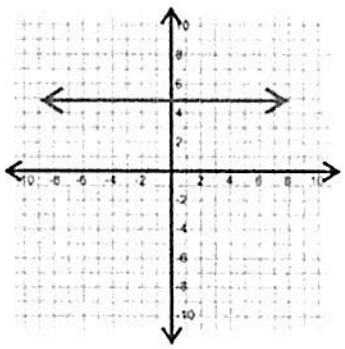


a. positive



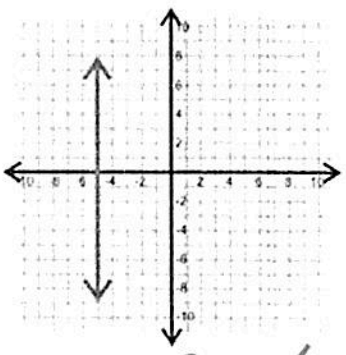
b. Negative

horizontal



c. zero

vertical



d. Undefined / No slope

11. Find the output for each input.

$y = -9x + 15$

Input	Rule	Output
x	$y = -9x + 15$	y
-5	$y = -9(-5) + 15$	60
1	$y = -9(1) + 15$	6
3	$y = -9(3) + 15$	-12

12. Rewrite the equation $y - 6x = 12$ in slope-intercept form. Then find the slope and y-intercept of the graph of the equation.

$y - 6x = 12$

$+6x \quad +6x$

$y = 6x + 12$

m = 6

b = 12

13. Rewrite the equation $2y + 5x = 12$ in slope-intercept form. Then find the slope and y-intercept of the graph of the equation.

$2y + 5x = 12$

$-5x \quad -5x$

$\frac{2y}{2} = \frac{-5x}{2} + \frac{12}{2}$

$y = -\frac{5}{2}x + 6$

m = $\frac{-5}{2}$

b = 6

14. Find the slope-intercept form of the line that passes through the point (-2, 3) and has a slope of 5. → m

x y

$y = mx + b$

$m = 5$

$b = 13$

$y = 5x + 13$

$y = mx + b$

$3 = 5(-2) + b$

$3 = -10 + b$

$+10 \quad +10$

$13 = b$

15. Find the slope-intercept form of the line that passes through the point (-2, 1) and has a slope of -3. → m x y

$y = mx + b$

$m = -3$

$b = -5$

$y = -3x - 5$

$y = mx + b$

$1 = -3(-2) + b$

$1 = 6 + b$

$-6 \quad -6$

$-5 = b$

17. What is the slope of the line whose equation is, $y = 3x + 7$?

$m = 3$

18. What is the equation of a line whose slope is 2 and y-intercept is (0, 8)?

m b

$y = mx + b$

$m = 2$

$b = 8$

$y = 2x + 8$

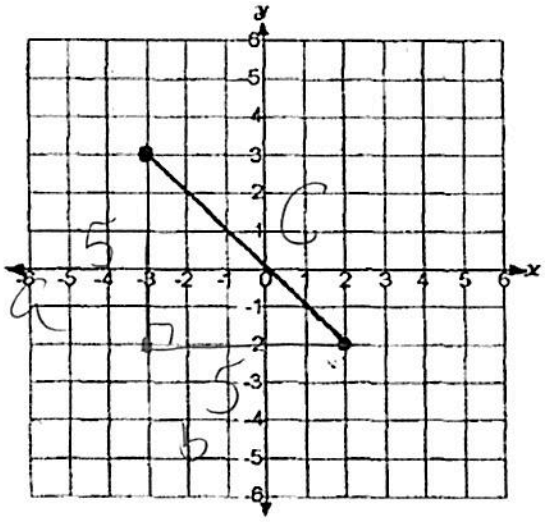
$y = mx + b$

$8 = 2(0) + b$

$8 = 0 + b$

$8 = b$

16. Approximate the length of the line to the nearest tenth.



$a^2 + b^2 = c^2$

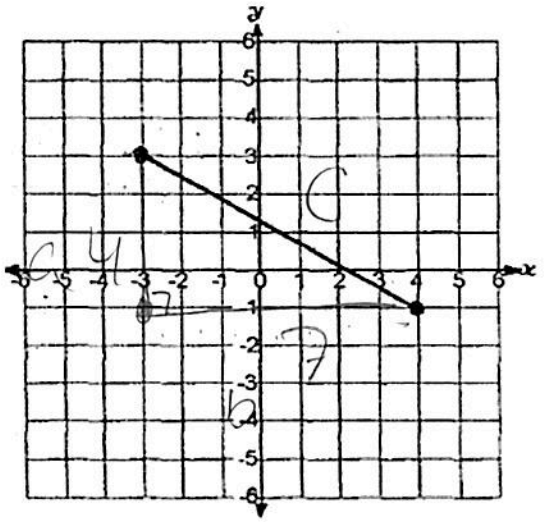
$5^2 + 5^2 = c^2$

$25 + 25 = c^2$

$\sqrt{50} = \sqrt{c^2}$

$C = 7.1$

19. Approximate the length of the line to the nearest tenth.



$a^2 + b^2 = c^2$

$4^2 + 7^2 = c^2$

$16 + 49 = c^2$

$\sqrt{65} = \sqrt{c^2}$

$C = 8.1$

20. Graph the equation $4x + 2y = 6$

Solve: $4x + 2y = 6$

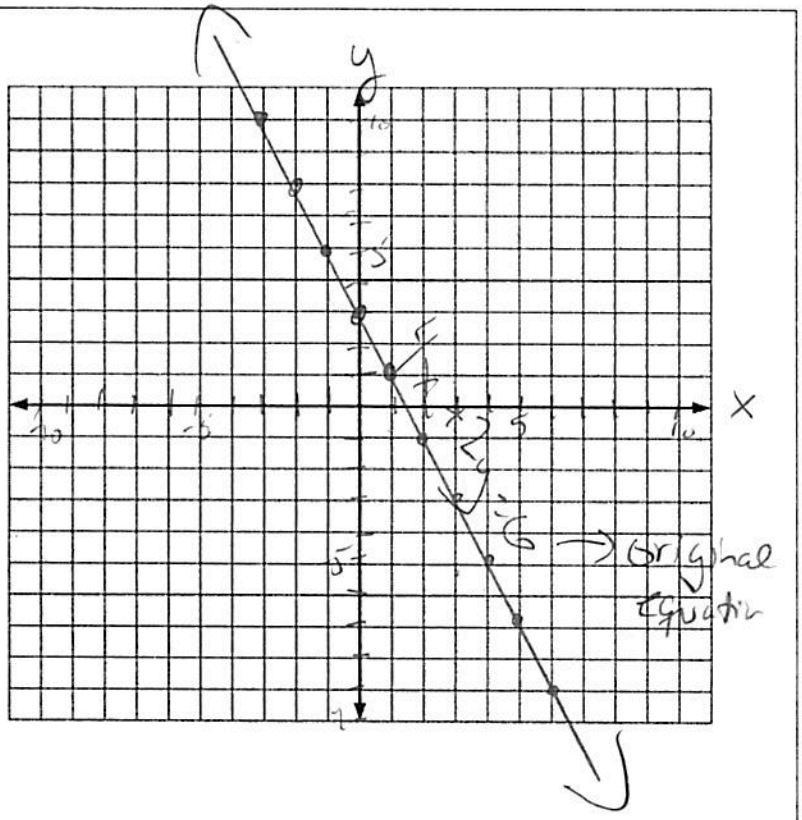
$-4x \quad -4x$

$\frac{2y}{2} = \frac{-4x + 6}{2}$

$y = -2x + 3$

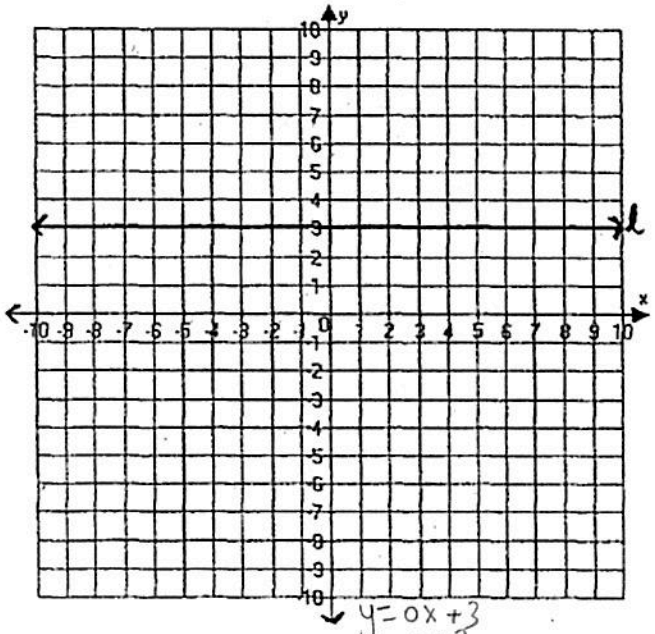
$m = \frac{-2 \downarrow}{1 \rightarrow} = \frac{-2}{1} = -2$ (rise/run)

$b = 3$ (y-int)



21. What is the equation of the line graphed below?

horizontal line



$y = mx + b$

$m = 0$

$b = 3$

$y = 0x + 3$

$y = 0 + 3$

$y = 3$

goes through the y-axis at 3.

22. What is the equation of a line that passes through the points (3, 4) and (2, 6)?

$x_1, y_1 \quad x_2, y_2$

$y = mx + b$

$m = -2$

$b = 10$

$y = -2x + 10$

(3,4) (2,6)

$x_1, y_1 \quad x_2, y_2$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

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

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

$m = -2$

$y = mx + b$ (3,4) x, y

$4 = -2(3) + b$

$4 = -6 + b$

$+6 \quad +6$

$10 = b$

23. Solve the given system of equations graphically.

$$y = x + 3$$
$$y = 2x + 1$$

$y = x + 3$

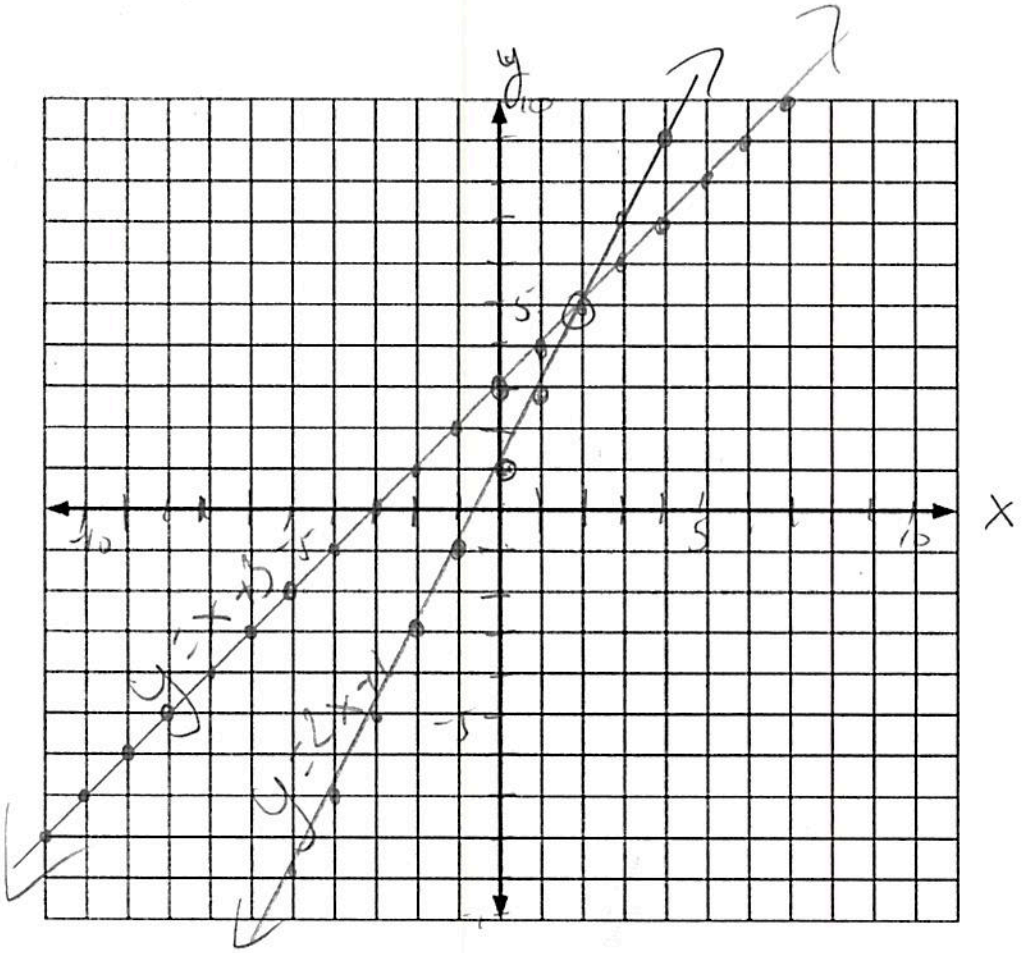
slope (m): $\frac{1}{1}$ ↑ → (1 over)

y-intercept (b): 3 (easier)

$y = 2x + 1$

slope (m): $\frac{2}{1}$ ↑ → (2 over 1)

y-intercept (b): 1 (easier)



Solution point: (2, 5)

Name of the system: Consistent

☆ Inconsistent = no solutions ↗↗

☆ Dependent = Infinite solutions ↗