

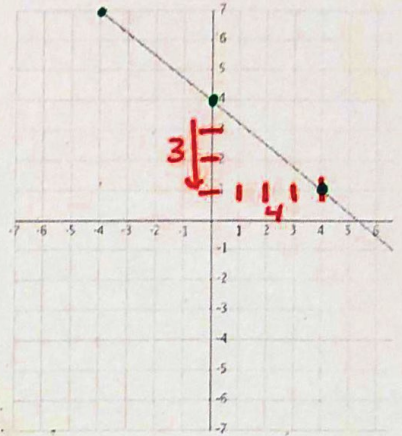
## Unit 2 Review

1. Write the equation of the line given in the graph in slope intercept form.

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

$$\frac{\text{rise}}{\text{run}} = \frac{-3}{4}$$

$$b = 4$$



2. Write the equation of a line given the table in slope intercept form.

$$y = 2x + 4$$

x	y
-3	-2
-2	0
-1	2
0	4
1	6
2	8
3	10
4	12

Solve the following word problems.

3. Four less than two times an unknown number is 30. Find the unknown number.

$$2x - 4 = 30$$

$$2x = 34$$

$$x = 17$$

4. Twice the total of a number and five is 45. Find the unknown number.

$$2x + 5 = 45$$

$$2x = 40$$

$$x = 20$$

## Unit 2A Review

5. The sum of twice a number and 5 is 25. Find the number.

$$2x + 5 = 25$$

$$2x = 20$$

$$\boxed{x = 10}$$

6. The sum of two consecutive integers is 241. Find both integers.

$$x + x + 1 = 241$$

$$2x + 1 = 241$$

$$2x = 240$$

$$x = 120$$

$$\boxed{120, 121}$$

7. The sum of three consecutive odd integers is 333. Find all three integers.

$$\underline{x} + \underline{x+2} + \underline{x+4} = 333$$

$$3x + 6 = 333$$

$$3x = 327$$

$$\boxed{x = 109}$$

$$\downarrow$$

$$\boxed{109, 111, 113}$$

8. You are trying to save up to purchase the new iPhone X. You want to save an average of \$60 a week. You have been saving for three weeks with savings of \$50, \$45, and \$55. What must you save in the fourth week to save an average of \$60 each week?

$$4. \quad \frac{50 + 45 + 55 + x}{4} = 60 \cdot 4$$

$$150 + x = 240$$

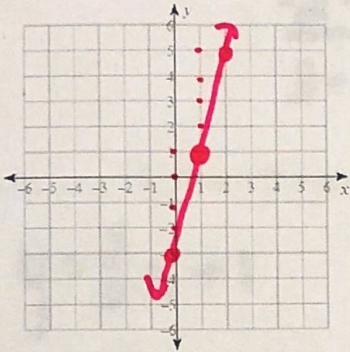
$$\boxed{x = 90}$$

$$\boxed{\$90}$$

Unit 2A Review

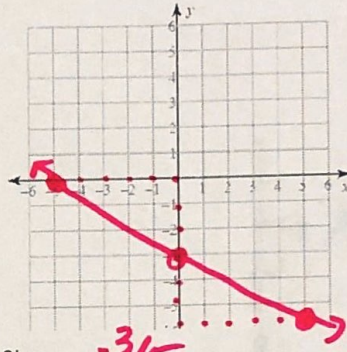
Directions: Sketch the graph of each line and identify the key characteristics listed below.

1)  $y = 4x - 3$



Slope: 4  
 Y Intercept: (0, -3)  
 X Intercept: (3/4, 0)  
 Domain:  $(-\infty, \infty)$   
 Range:  $(-\infty, \infty)$   
 Interval of Increase:  $(-\infty, \infty)$   
 Interval of Decrease: —  
 As  $x \rightarrow +\infty$ ,  $f(x) \rightarrow \infty$   
 As  $x \rightarrow -\infty$ ,  $f(x) \rightarrow -\infty$

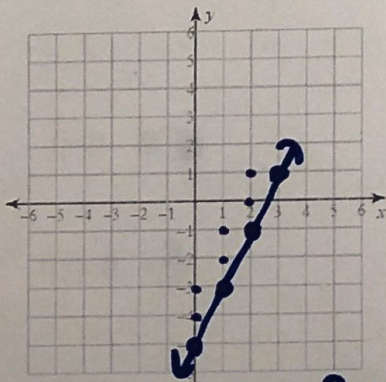
11.  $y = -\frac{3}{5}x - 3$



Slope:  $-3/5$   
 Y Intercept: (0, -3)  
 X Intercept: (-5, 0)  
 Domain:  $(-\infty, \infty)$   
 Range:  $(-\infty, \infty)$   
 Interval of Increase: —  
 Interval of Decrease:  $(-\infty, \infty)$   
 As  $x \rightarrow +\infty$ ,  $f(x) \rightarrow -\infty$   
 As  $x \rightarrow -\infty$ ,  $f(x) \rightarrow \infty$

Directions: Solve for y and sketch the graph of each line.

3)  $2x - y = 5$

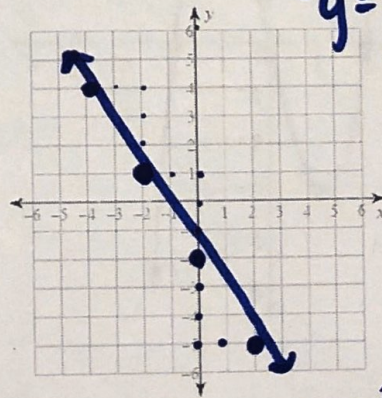


$-y = -2x + 5$   
 $y = 2x - 5$

Slope Intercept Form:  $y = 2x - 5$

Slope: 2 Y Intercept: -5

4)  $3x + 2y = -4$



$2y = -3x - 4$   
 $y = -\frac{3}{2}x - 2$

Slope Intercept Form:  $y = -\frac{3}{2}x - 2$

Slope:  $-3/2$  Y Intercept: -2

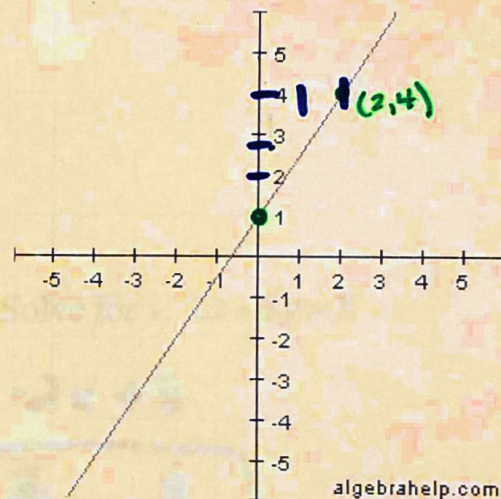
## Unit 2A Review

- $m = -1$  14. Find the average rate of change (slope) between the two points  $(-4, 5)$  and  $(3, -2)$ .

$$\frac{-2 - 5}{3 - (-4)} = \frac{-7}{7} = -1$$

- \_\_\_\_\_ 15. Given the graph, find the equation of the line.

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



- $3$  16. Determine the slope for the following equation:  $3x - y = 7$

$$\begin{aligned} -y &= -3x + 7 \\ y &= 3x - 7 \end{aligned}$$

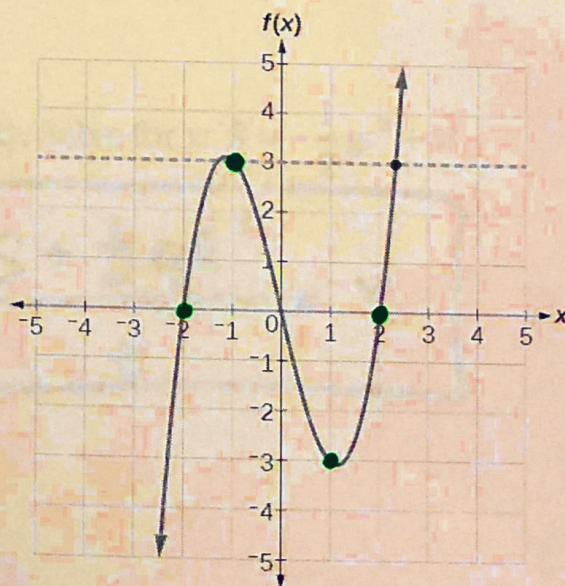
17. Given the graph of the function  $f(x)$ , find:

$$f(-1) = 3$$

$$f(2) = 0$$

$$f(-2) = 0$$

$$f(1) = -3$$



18. Evaluate  $f(x) = 2x - 6$  when for  $f(3)$ .

$$2(3) - 6 \quad 0$$

19. Find  $f(x) + g(x)$  when  $f(x) = x^2 - 3x + 2$  and  $g(x) = 2x^2 + 5x - 7$ .

$$(f+g)(x) = 3x^2 + 2x - 5$$

20. Find  $f(x) - g(x)$  when  $f(x) = x^2 - 3x + 2$  and  $g(x) = 2x^2 + 5x - 7$ .

Literal Equations:

21. Solve for  $y$ :  $x = \frac{2y - z}{4}$

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

22. Solve for  $y$ :  $2x - 3y = 8$

$$\begin{aligned} -3y &= -2x + 8 \\ y &= \frac{2}{3}x - \frac{8}{3} \end{aligned}$$

23. Solve for  $b$ :  $A = \frac{a + b + c}{3}$

$$3A - a - c = b$$

24. Solve for  $v$ :  $S = -\frac{1}{2}gt^2 + vt$

$$\frac{S + \frac{1}{2}gt^2}{t} = v$$