

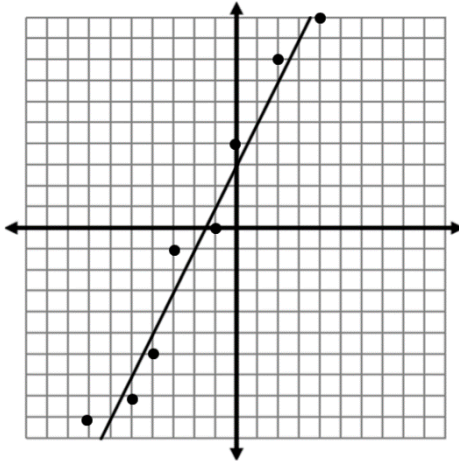
# WORKSHEET 4.5 – Interpreting Data



Name: \_\_\_\_\_ Hour: \_\_\_\_\_ Date: \_\_\_\_\_

**SECTION 1:** Use the given equations to interpolate and extrapolate the requested values.

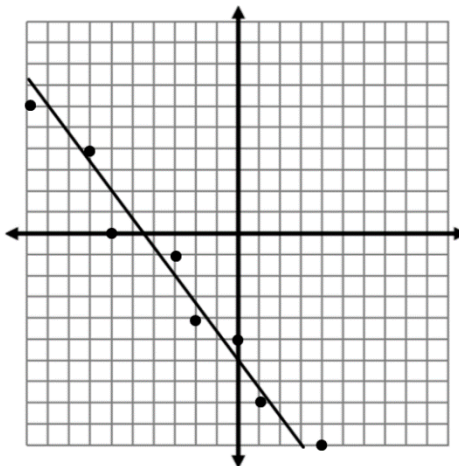
1) This data is modeled by the equation  $y = 2x + 3$ .



- A) Approximate the value of  $y$  when  $x = 1$ .
- B) Approximate the value of  $x$  when  $y = 5$ .
- C) Predict the value of  $y$  when  $x = 12$ .
- D) Predict the value of  $x$  when  $y = -37$

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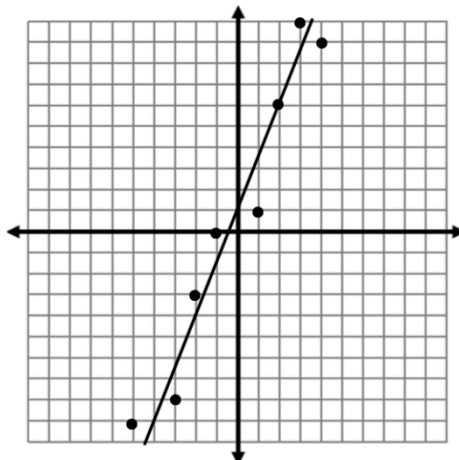
2) This data is modeled by the equation  $y = -\frac{3}{4}x - 6$ .



- A) Approximate the value of  $y$  when  $x = -6$ .
- B) Predict the value of  $y$  when  $x = -108$ .
- C) Approximate the value of  $x$  when  $y = 3$ .
- D) Predict the value of  $x$  when  $y = 17$ .

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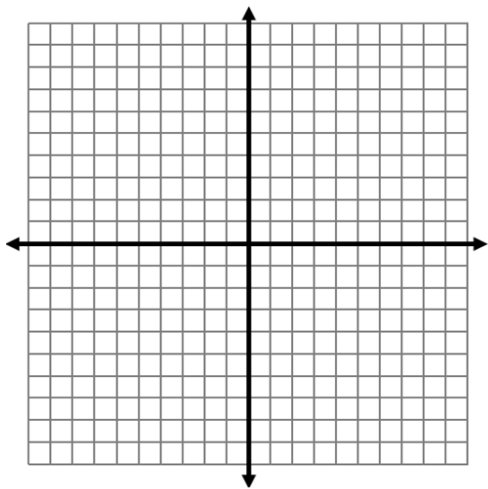
3) This data is modeled by the equation  $y = \frac{5}{2}x + 1$ .



- A) Predict the value of  $y$  when  $x = 8$ .
- B) Approximate the value of  $x$  when  $y = -5$ .
- C) Approximate the value of  $y$  when  $x = -4$ .
- D) Predict the value of  $x$  when  $y = -439$ .

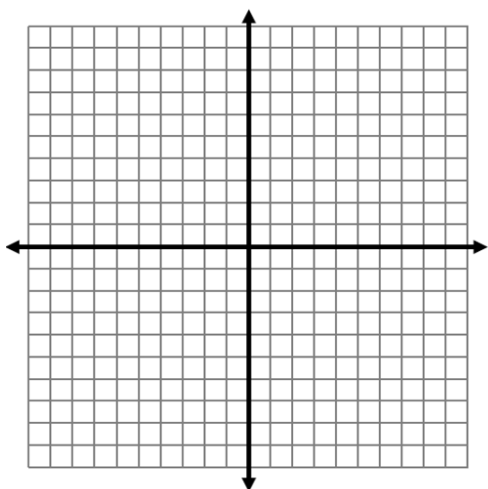
**SECTION 2:** Calculate the residuals of each set of data, then graph to determine if the given equation is a good model for the data.

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



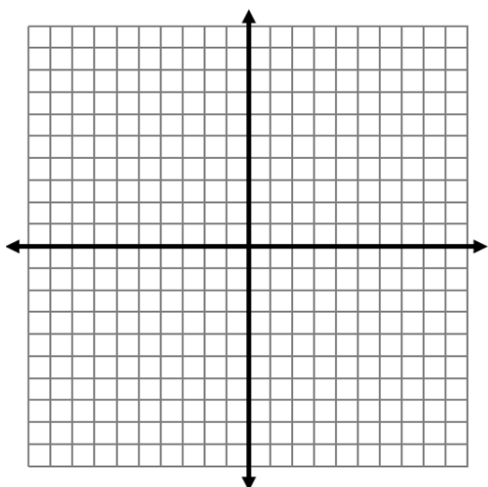
$x$	$y$	$y_1$	Residual	Point
-6	8			
-3	7			
-2	5			
1	4			
3	3			
4	1			
7	0			
8	-2			

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



$x$	$y$	$y_1$	Residual	Point
-5	-9			
-4	-6			
-3	-3			
-2	1			
-1	5			
1	6			
4	7			
9	8			

6)  $y = 3x - 8$



$x$	$y$	$y_1$	Residual	Point
-1	-9			
0	-6			
1	-7			
2	-3			
3	0			
4	5			
5	6			
6	10			