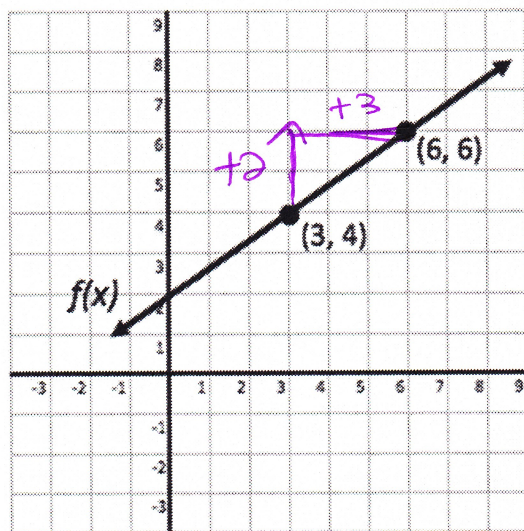


1. The graph of the line  $f(x)$  is shown below



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

Which equation describes a line perpendicular to line  $f(x)$  and has a y-intercept of  $(0, 5)$ ?

- A.  $y = \frac{2}{3}x + 5$
- B.  $y = -\frac{3}{2}x + 2$
- C.  $y = \frac{3}{2}x + 5$
- D.  $y = -\frac{3}{2}x + 5$  Correct answer

$\rightarrow$  flip slope; change sign  
 original slope =  $\frac{2}{3}$   
 perpendicular slope =  $-\frac{3}{2}$   
 $x=0$ , so this is your b.  
 $y = -\frac{3}{2}x + 5$

2. Which table represents the same slope as the equation  $y = -\frac{3}{2}x - 6$  Correct answer: A

A. 

x	y
$x_1 = -2$	$y_1 = 6$
$x_2 = 0$	$y_2 = 3$
2	0
4	-3
6	-6

 $\rightarrow -3 = \frac{-3}{2}$

B. 

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

Trying to get same as  $-\frac{3}{2}$

C. 

x	y
-2	7
-1	4
0	1
1	-2
2	-5

D. 

x	y
-6	0
-4	3
-2	6
0	9
2	12



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

3. A line passes through the points  $(x_1, y_1)$  and  $(x_2, y_2)$  and has a slope of  $-\frac{5}{2}$ . What is the value of  $x$ ?

- A. -2
- B. -1
- C. 2 **Correct answer**
- D. -10

$$-\frac{5}{2} = \frac{6 - (-9)}{-4 - x}$$

$$-5 = \frac{15}{-4 - x}$$

cross multiply

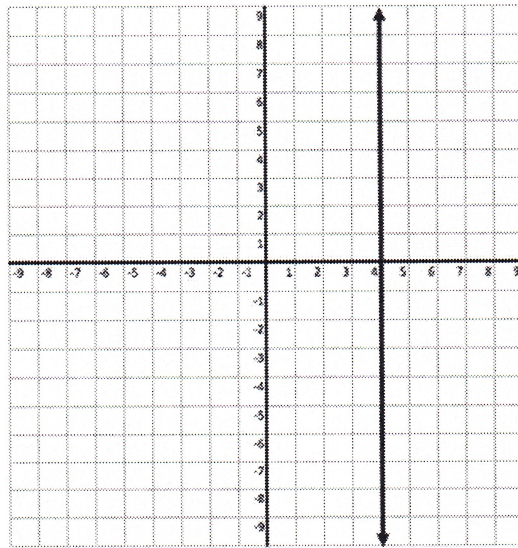
$$-5(-4 - x) = 30$$

$$20 + 5x = 30$$

$$\frac{-20}{-20} \quad \frac{-20}{-20}$$

$$\frac{5x}{5} = \frac{10}{5} \quad \boxed{x = 2}$$

4. Using the graph, determine the slope of the line and write an equation to represent the graph.



↕ means  
undefined slope  
 $x = \#$

↔ means  
no slope  
 $y = \#$

- A. Slope = 0;  $x = 4$
- B. Slope = 4;  $y = 4x$
- C. Slope = undefined;  $x = 4$  **Correct answer**
- D. Slope = 0;  $y = 4x$

5. Which equation is parallel to a line that contains the points  $(-3, 1)$  and  $(2, -3)$ .

→ same slope

A.  $y = -\frac{4}{5}x + 2$  **Correct answer**

B.  $y = \frac{5}{4}x - 3$

C.  $y = -\frac{5}{4} - 1$

D.  $y = \frac{4}{5}x + 4$

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

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

matches