

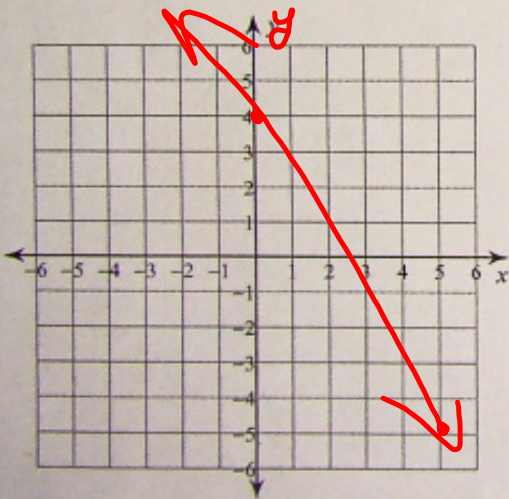
Warm Up

Name _____

Linear Equations

Sketch the graph of each line.

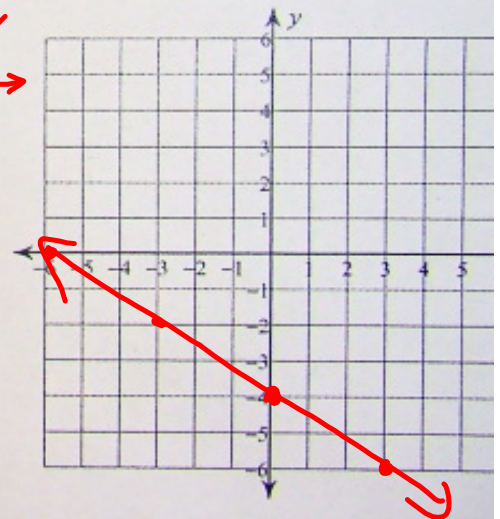
1) $y = -\frac{9}{5}x + 4$



Slope: $-\frac{9}{5}$ ↓
y-int: 4 →

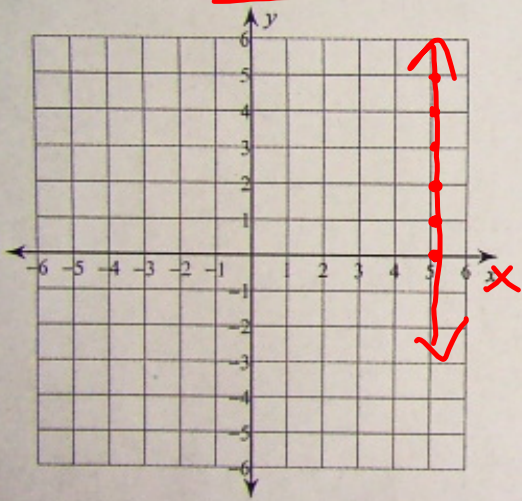
2) $y = -\frac{2}{3}x - 4$

↓ Slope: $-\frac{2}{3}$
→ y-int: -4



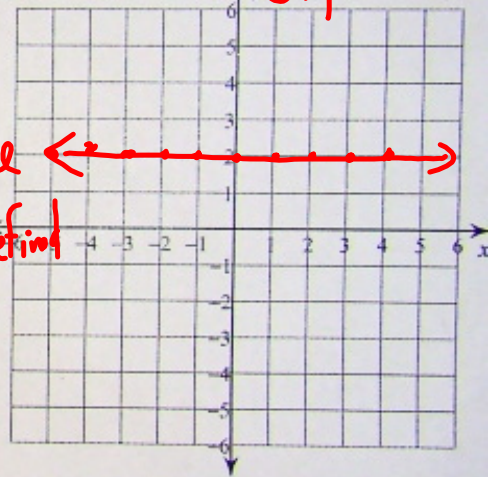
3) $x=5$

Vertical



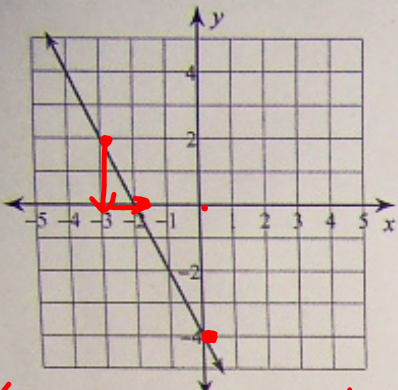
4) $y=2$ Horizontal
 $y=0x+2$ $y\text{-int}=2$
 $\text{slope}=0$

$y\text{-int} = \text{None}$
 $\text{Slope} = \text{Undefined}$



Write the slope-intercept form of the equation of each line.

5)



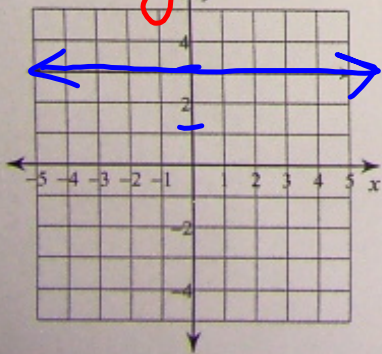
$$y = mx + b$$

(b) $y\text{-int} = -4$

(m) $\text{Slope} = \frac{\text{rise}}{\text{run}} = \frac{-2}{1} = -2$

$$y = -2x - 4$$

7)



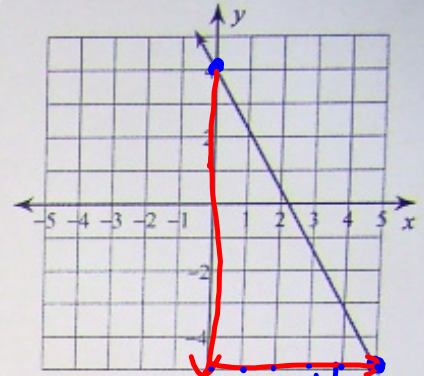
Slope: $\frac{0}{1}$

$y\text{-int}: 3$

$$y = 0x + 3$$

$$y = 3$$

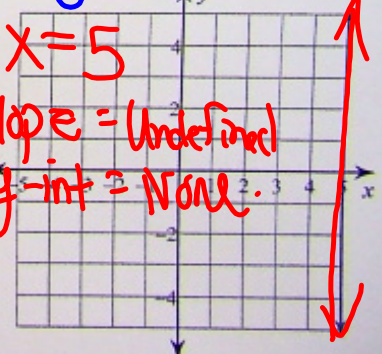
6)



$y\text{-int}: 4$
Slope: $-\frac{4}{5}$

$$y = -\frac{4}{5}x + 4$$

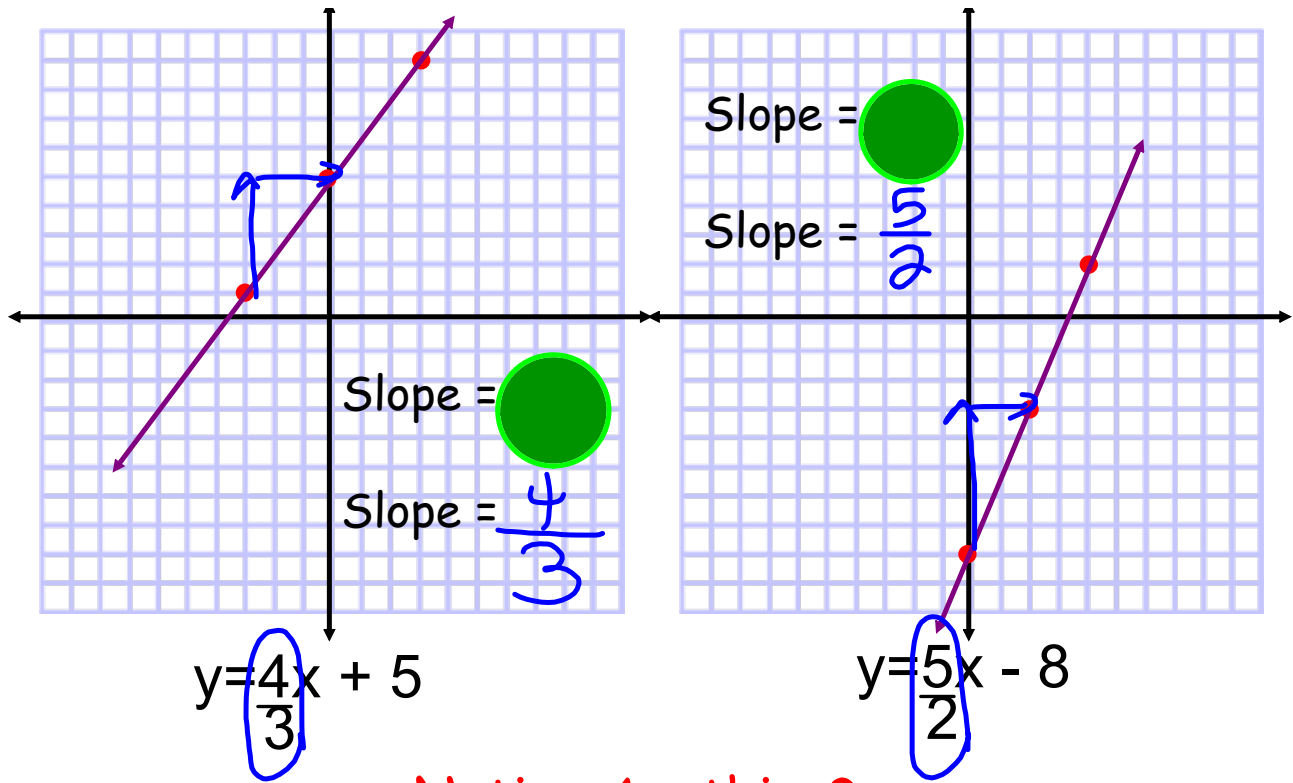
8)



$x = 5$

Slope = Undefined

$y\text{-int} = \text{None}$



Notice Anything?

x	y
1	7
2	10
3	13
4	16

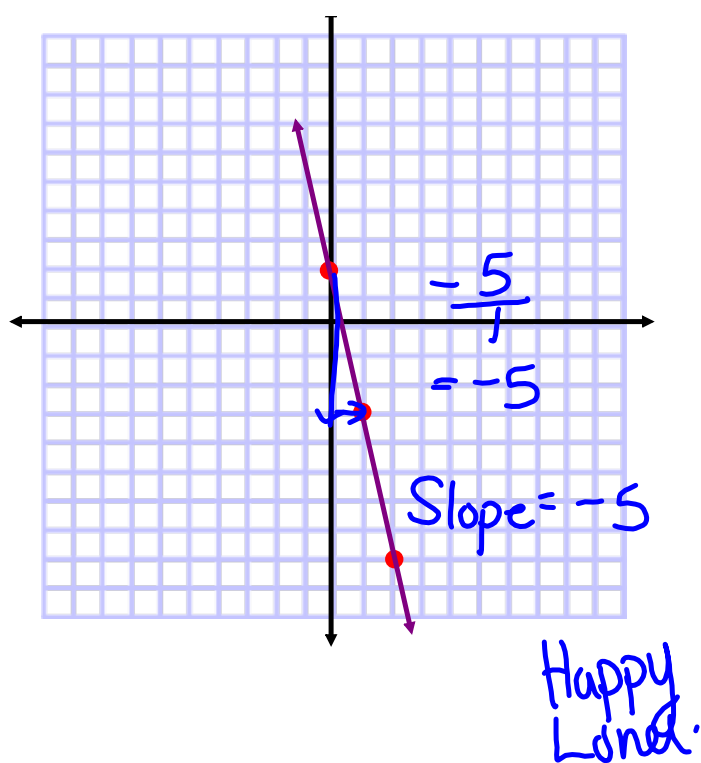
(Slope) Pattern = 3
 (y-int) Adjustment = 4
 $y = 3x + 4$

x	y
5	12
6	9
7	6
8	3
9	0
10	

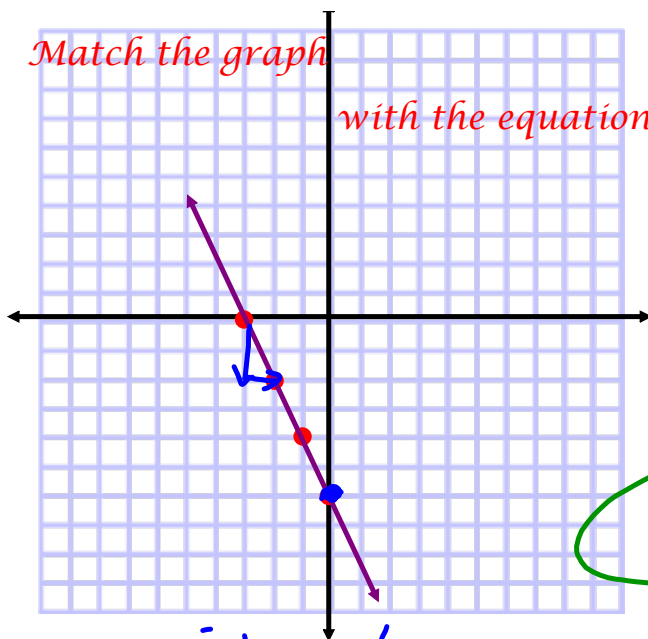
Pattern: -3
 Adjustment: 27
 $y = -3x + 27$

x	y
0	5
1	10
2	15
3	20
4	25

Pattern: 5
 Adjustment: 5
 $y = 5x + 5$



$$\text{Slope} = \frac{\text{rise}}{\text{run}}$$
$$=$$
$$\frac{5y}{5} = -\frac{1}{5}x + \frac{2}{5}$$
$$\frac{5}{5}y = \frac{-1}{5}x + \frac{2}{5}$$



$$y = -2x + 6$$

$$\frac{2y}{2} = \frac{-1x}{2} - \frac{12}{2}$$
$$y = -\frac{1}{2}x - 6$$

$$y = -2x - 6$$

$$y\text{-int} = -6$$
$$\text{Slope} = \frac{-2}{1} = -2$$
$$y = -2x - 6$$

Match the equation

with the graph.

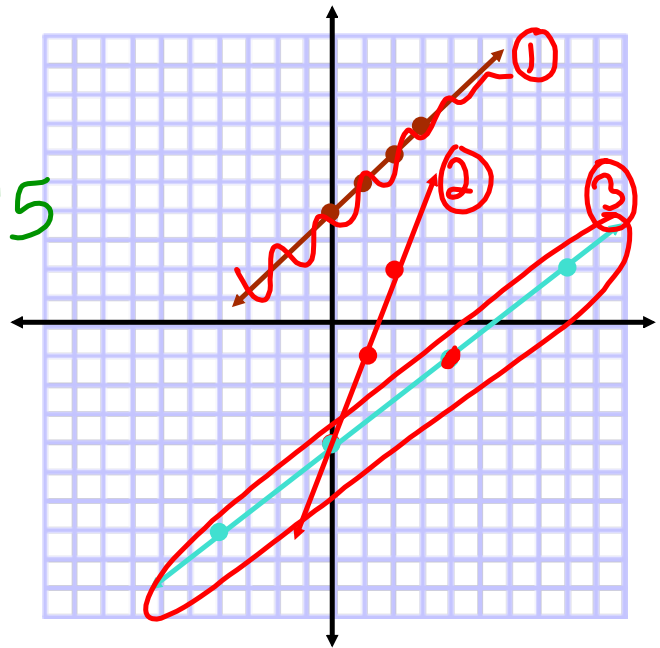
$$4y + 15 = 3x - 1 - 15$$

$$\frac{4y}{4} = \frac{3x}{4} - \frac{16}{4}$$

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

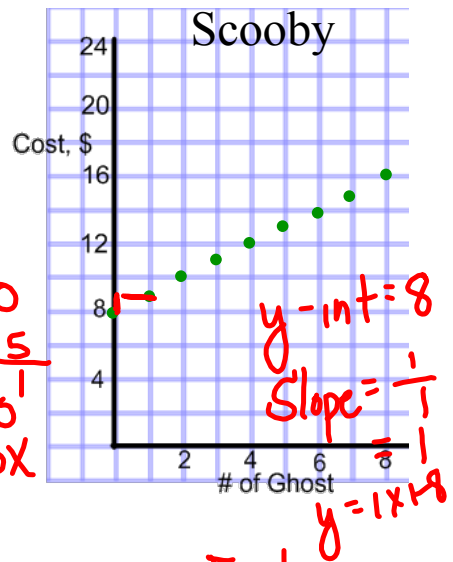
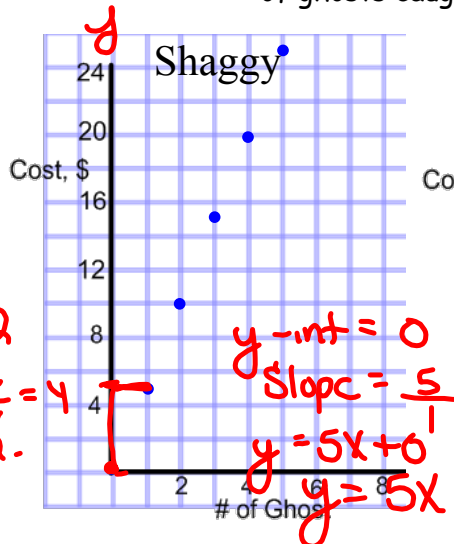
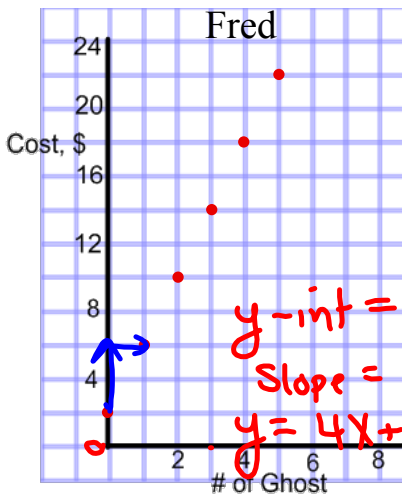
$$y\text{-int} = -4$$

$$\text{Slope} = \frac{3}{4}$$





Fred, Shaggy and Scooby are hired to find ghosts. Each ghost hunter charges a different rate. These graphs show how the cost is related to the number of ghosts caught.



Match each graph with its equation:

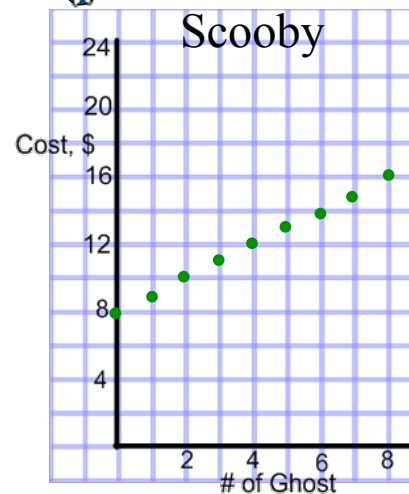
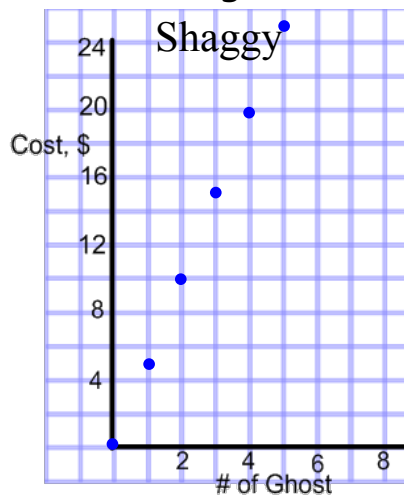
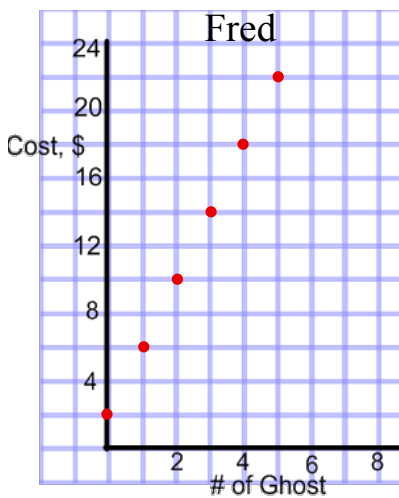
Scooby
 $y = x + 8$

Shaggy
 $y = 5x$

Fred.
 $y = 4x + 2$



Fred, Shaggy and Scooby are hired to find ghosts. Each ghost hunter charges a different rate. These graphs show how the cost is related to the number of ghosts caught.



Match each graph with its equation:

$$y = x + 8$$

$$y = 5x$$

$$y = 4x + 3$$

Explain your Strategy

*

*



ERASE

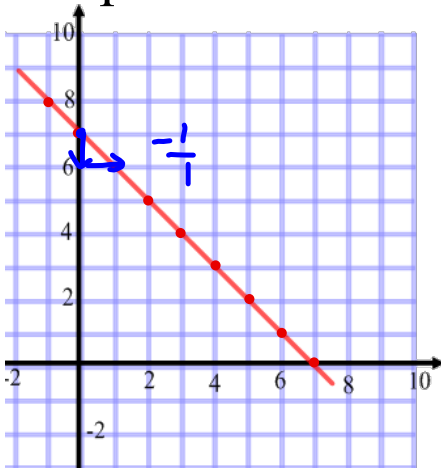
Match the equation with the graph.

(C) $y = 2x + 4$
 $y\text{-int} = 4$
 Slope = $\frac{2}{1}$

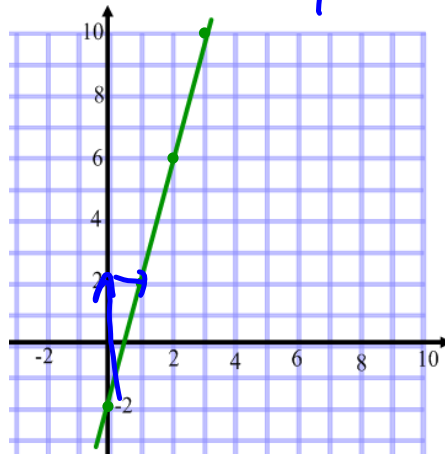
(A) $x + y = 7$
 $y = -x + 7$
 $y = -1x + 7$
 $y\text{-int} = 7$
 Slope = $-\frac{1}{1}$

(B) $y = 4x - 2$
 $y\text{-int} = -2$
 Slope = $\frac{4}{1}$

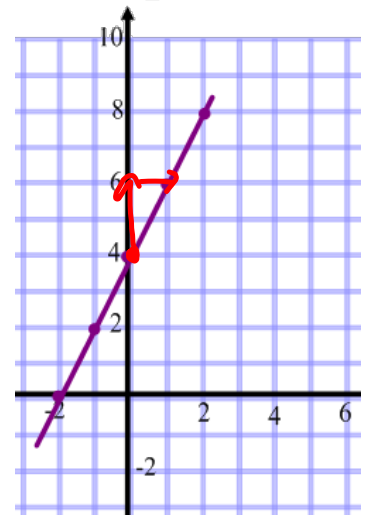
Graph A



Graph B

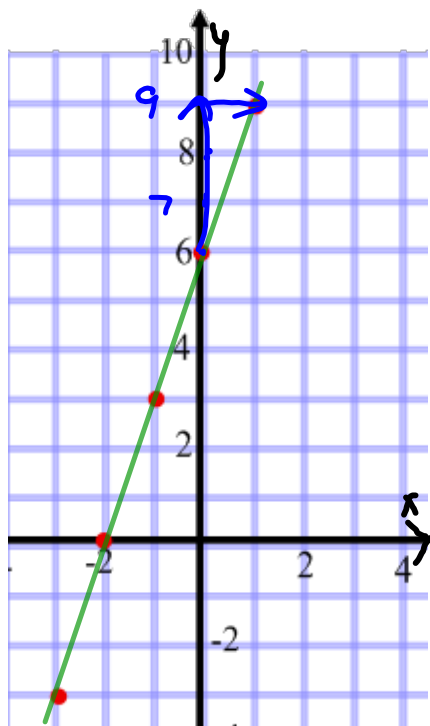


Graph C



Which equation represents the graph?

1



Pick the correct equation

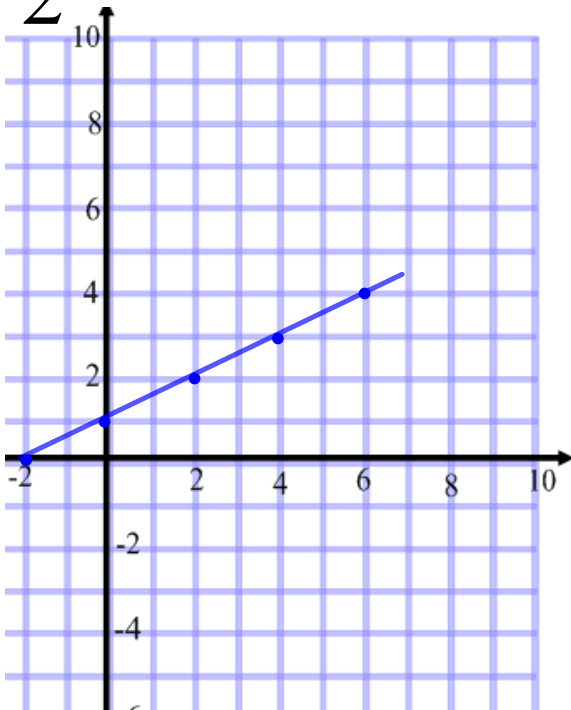
a) $y = -5x + 6$

b) $y = 3x + 6$

c) $y = 2x - 5$

Which equation represents the graph?

2



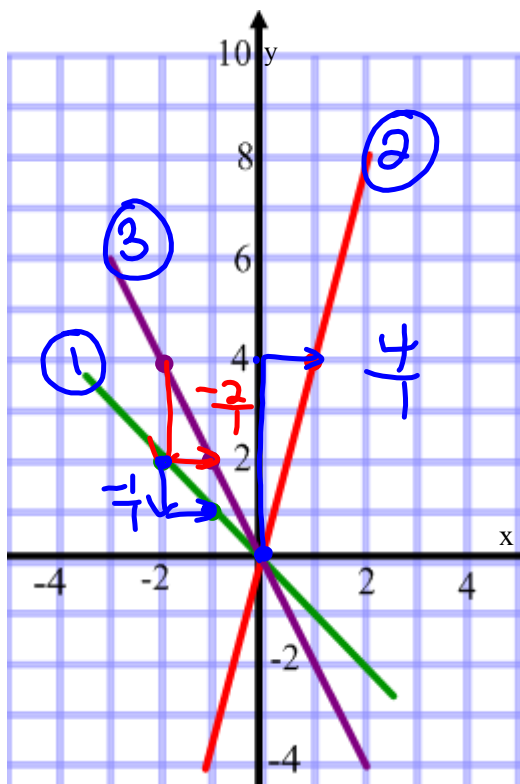
∴ Pick the correct equation

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

b) $y = 2x + 1$

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

Matching Equations with Graphs that Pass Through the Origin



Match each graph on the grid with its equation

(Use the previous slide to help answer)

① $y = -x + 0$ → $y = -1x$

② $y = 4x + 0$

③ $y = -2x + 0$

Notice that when it is through the origin then nothing is added at the end. (no constant)

Hint: Start at (0,0)

Homework

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3,4 and 5

