

TEST POINTS TO SEE WHICH GRAPH MATCHES WHICH EQUATION

$y = 3x + 3$

$y = 3(0) + 3$
 $= 0 + 3$
 $= 3$
 $y = 3(1) + 3$
 $= 3 + 3$
 $= 6$
 $y = 3(2) + 3$
 $= 6 + 3$
 $= 9$

x	y
0	3
1	6
2	9

$x + y = 3$

$0 + y = 3$
 $y = 3$
 $-1 + y = 3$
 $y = 4$
 $2 + y = 3$
 $y = 1$

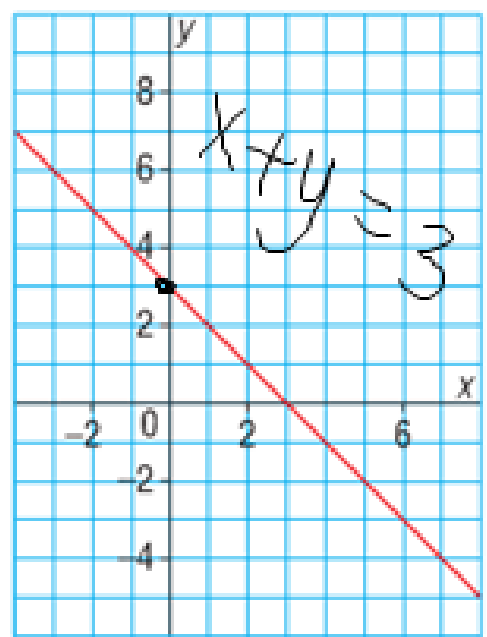
x	y
0	3
1	2
2	1

$y = 3x - 3$

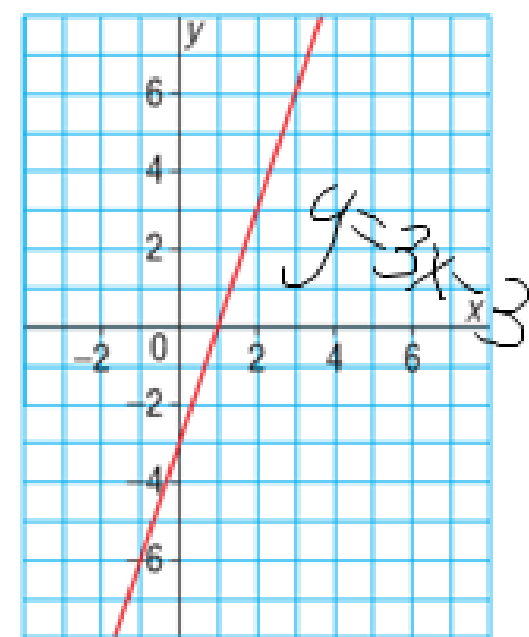
$y = 3(0) - 3$
 $y = 0 - 3$
 $y = -3$
 $y = 3(1) - 3$
 $y = 3 - 3$
 $y = 0$
 $y = 3(2) - 3$
 $y = 6 - 3$
 $y = 3$

x	y
0	-3
1	0
2	3

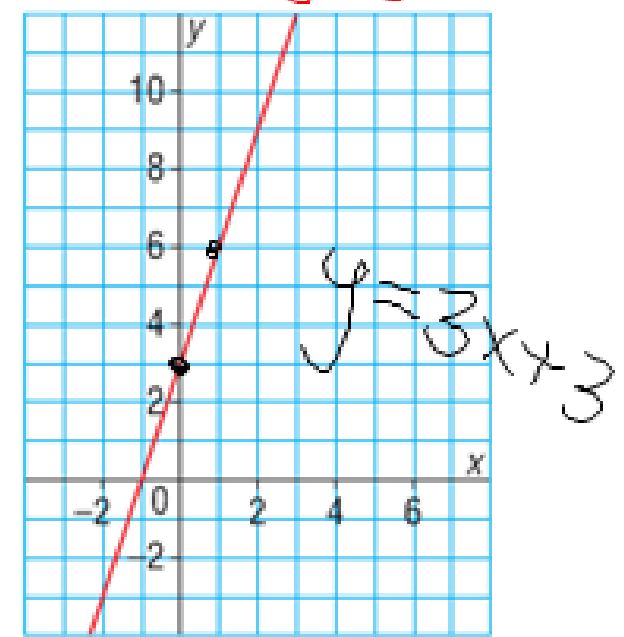
Graph A



Graph B

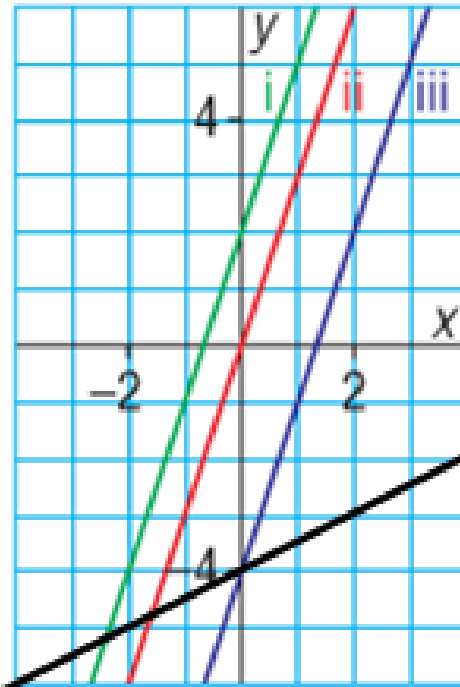


Graph C



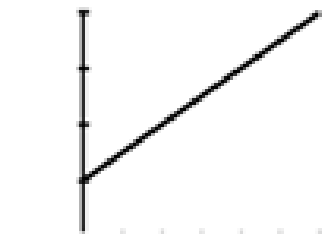
Which graph on this grid has the equation $y = 3x - 4$?

Slope = $\frac{3}{1}$ up over

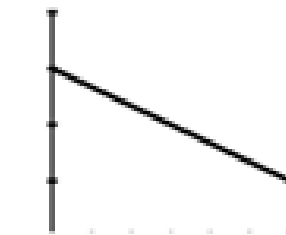


$$y = \frac{1}{2}x - 4$$

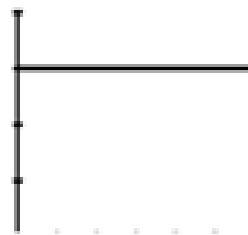
Starts at -4 on y axis



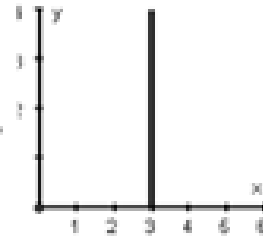
Positive Slope
 $m = \text{positive number}$



Negative Slope
 $m = \text{negative number}$



Zero Slope
 $y = \#$



Undefined slope
 $x = \#$

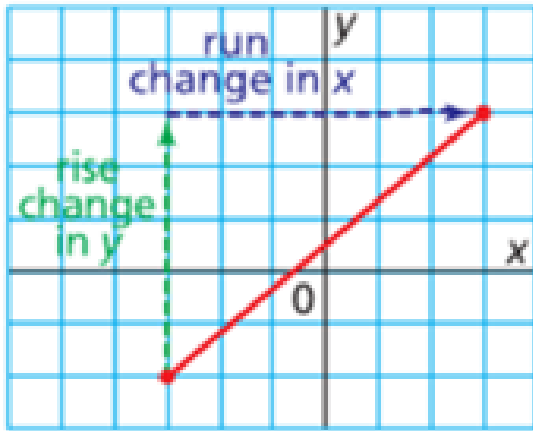
$$\text{Slope} = \frac{\text{rise (how far up)}}{\text{run (how far over)}}$$

$$y = mx + b$$

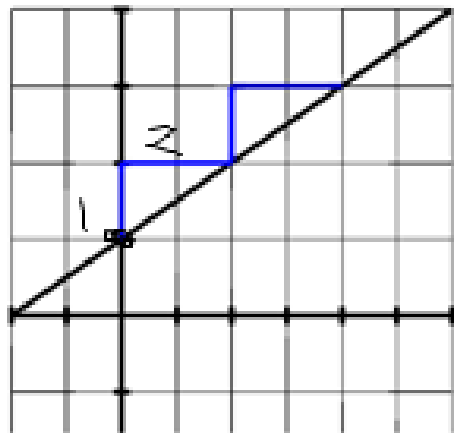
$m = \text{slope}$

$b = \text{y intercept}$

→ where the line crosses the y axis



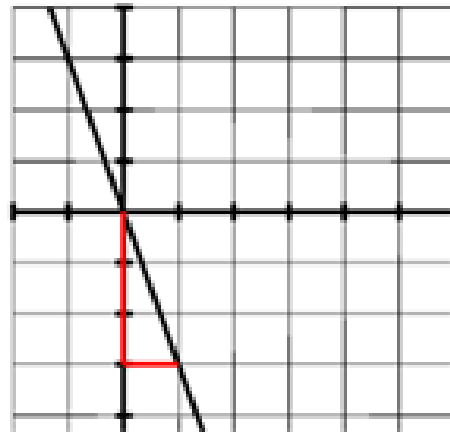
So, slope = $\frac{\text{rise}}{\text{run}}$



$m = \frac{1 \text{ (up)}}{1 \text{ (over)}}$

$y = mx + b$
 $y = mx + 1$
 $y = \frac{1}{1}x + 1$

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



$y = mx + b$

$y = -3x$

$b = 0$

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

FOR THIS SLOPE AND Y INTERCEPT METHOD TO WORK

THE EQUATION MUST BE REARRANGED TO BE IN $Y=$ FORM

practice pg 188 #3-9, 11
CHALLENGE 13