Lesson 5-5B - Parallel and Perpendicular Lines

Answers (repuestas) p.262 #1-13 odd:

1) $m = \frac{1}{2}$

3) $m = 1$

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

7) no, different slopes

9) yes, same slopes

11) yes, same slopes

13) $y = 6x$

Due Tomorrow: p.262 #12-16 even; 19-24 all; 25, 26

13. $y = 6x - 2; (0, 0)$

x y

$m = 6$

$y = mx + b$

$b = 0$

$0 = 6(0) + b$

$y = 6x$

$0 = 0 + b$

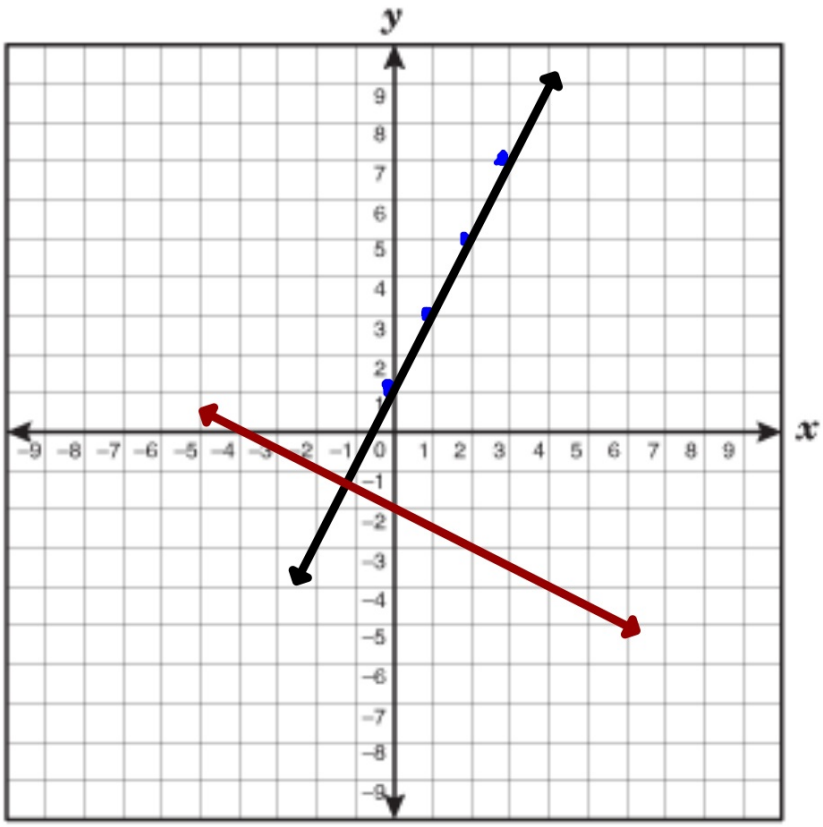
$0 = b$

Name:
Period:
Date:

Are these lines parallel?
EXPLAIN!

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

$$3x + 2y = 8$$



Graph the two lines

$$y = 2x + 1$$

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

Perpendicular lines: the slopes are negative reciprocals.

The negative reciprocal of 4 is $-\frac{1}{4}$.

The slope of the line $y = -\frac{2}{3}x + 10$ is $-\frac{2}{3}$.

The slope of the perpendicular line is $\frac{3}{2}$.

Write the equation of the line that passes through the point (6, 10) and is perpendicular to $y + 2x = 5$.

x y

$-2x \quad -2x$

$y = \frac{-2x}{1} + 5$

$m = \frac{1}{2}$

$b = 7$

$y = mx + b$

$10 = \frac{1}{2}(6) + b$

$10 = 3 + b$

$7 = b$

$y = \frac{1}{2}x + 7$