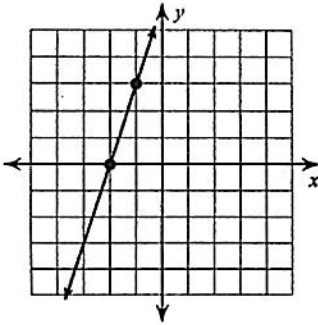


Parallel & Perpendicular Slopes & Equations of Lines

Date _____

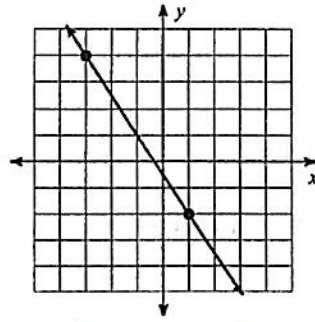
Find the slope of each line.

1)



$$m = 3$$

2)



$$\frac{-6}{4} = -\frac{3}{2}$$

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

Find the slope of the line through each pair of points.

3) $(2, -10), (8, -16)$

$$\frac{\Delta y}{\Delta x} = \frac{-16 - (-10)}{8 - 2} = \frac{-6}{6}$$

$$m = -1$$

4) $(-17, -5), (15, -13)$

$$\frac{\Delta y}{\Delta x} = \frac{-13 - (-5)}{15 - (-17)} = \frac{-8}{32}$$

$$m = -\frac{1}{4}$$

Find the slope of each line.

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

$$m = \frac{9}{5}$$

6) $y = 5$

$$m = 0$$

Find the slope of a line parallel to each given line.

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

$$m = -\frac{5}{2}$$

Same
slope

8) $y = -x - 5$

$$m = -1$$

* Parallel lines have same slope

* Perpendicular Lines have slopes that are opposite reciprocals

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

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

10) $y = -\frac{1}{3}x - 4$

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

11) $7x - 5y = 20$

$-\frac{5y}{-5} = \frac{7x+20}{-5} \Rightarrow y = -\frac{7}{5}x - 4$

$m = -\frac{7}{5}$

12) $5x + y = 3$

$y = -5x + 3$

$m = -5$

Find the slope of a line perpendicular to each given line. * Use opposite reciprocal of given slope

13) $x - y = 0$

$y = 1x$

$m = -1$

14) $x + 2y = 6$

$\frac{2y}{2} = \frac{-x+6}{2}$

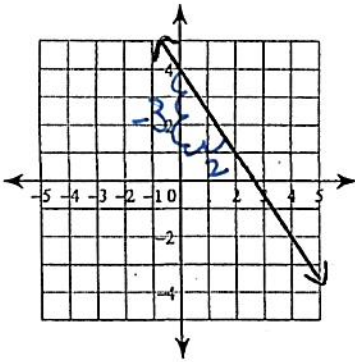
$m = \frac{2}{1}$

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

Writing Linear Equations

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

1)

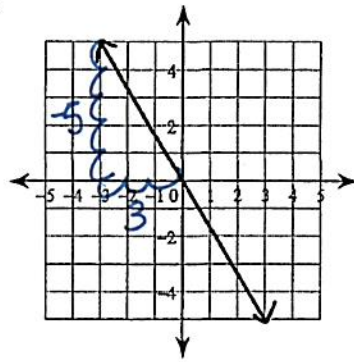


$m = -\frac{3}{2}$

$y\text{ int} = 4$

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

2)

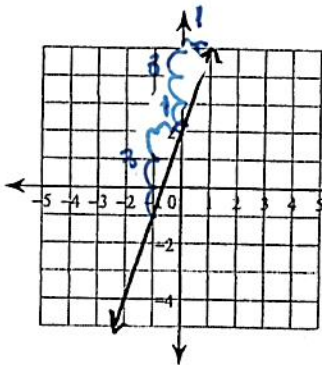


$m = -\frac{5}{3}$

$y\text{ int} = 0$

$y = -\frac{5}{3}x$

3)

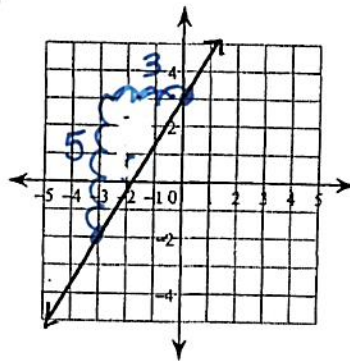


$m = 3$

$y\text{ int} = 2$

$y = 3x + 2$

4)



$m = \frac{5}{3}$

$y\text{ int} = 3$

$y = \frac{5}{3}x + 3$