NAME _____ DATE _____

guided notes

Module 8 Writing Linear Equations of Two Variables

Lesson 2 Writing Equations of Lines, Given the Slope and *y*-Intercept

Lesson Objectives

- Write the equation of a line using slope-intercept form when given a graph.
- Write the equation of a line using slope-intercept form when given the slope and *y*-intercept.
- Write the equations of vertical and horizontal lines.
- Write the equations of lines parallel and perpendicular to given lines.

A line's _____ is the *y*-coordinate of the point where the line intersects the *y*-axis.

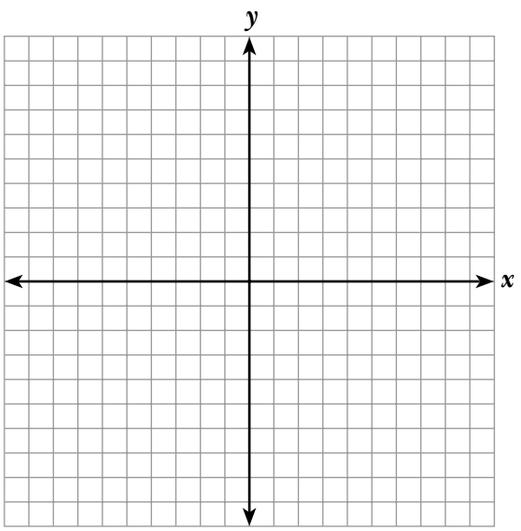
The _____ of a line and its _____ must be known to write the equation of a line.

Slope-intercept form for the equation of a line is _____.

In slope-intercept form, *m* stands for _____, and *b* stands for the _____.

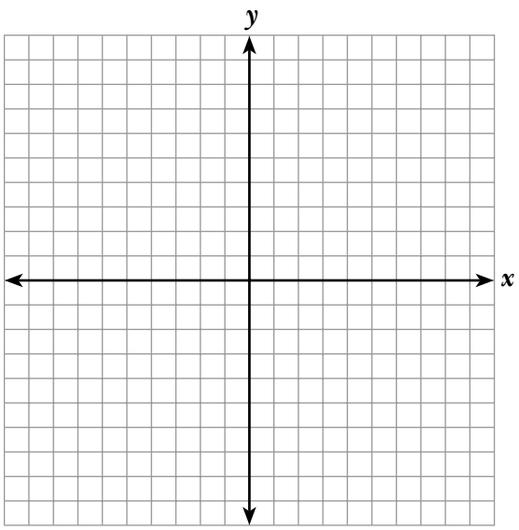
1 Write the equation of the line.

_____



2 Write the equation of the line.

_____



The slope of a horizontal line is _____. The slope of a vertical line is _____. The equation of a horizontal line takes the form _____. The equation of a vertical line takes the form _____.

3 Write the equation of the line given:

Slope: $-\frac{5}{6}$

y-intercept: 4

_____

4 Write the equation of the line given:

Slope: undefined

Passes through (–2, –4)

_____

5 Write the equation of the line given:

Slope: 0

Passes through (1, –9)

_____

If two lines have the same slope, they are _____.

If two nonvertical lines are perpendicular, their slopes are _____.

The _____ of $\frac{a}{b}$ is $\frac{b}{a}$.

The _____ of $\frac{2}{3}$ is $-\frac{3}{2}$.

6 Write the equation of the line given:

Parallel to $y = -\frac{4}{7}x - 2$

y-intercept: –3

_____

7 Write the equation of the line given:

Perpendicular to $y = -\frac{3}{4}x + 5$

y-intercept: –2

_____

Parallel lines have the _____ slope.

Nonvertical perpendicular lines have slopes that are _____ reciprocals.

Horizontal lines have a slope of _____.

Vertical lines have an _____ slope.