

Algebra II
Auch

Section 2.4
Date:

Objectives

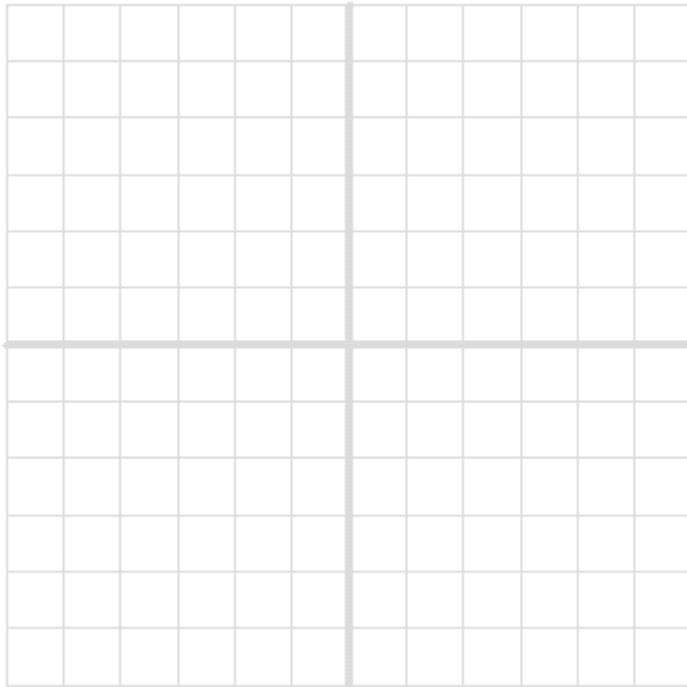
- Use slope-intercept form and point-slope form to write linear functions.
- Write linear functions to solve problems..

Vocabulary:

- Point-slope form -

Example 1

Write the equation of the graphed line in slope-intercept form.



Example 2

Finding the slope of a line given two or more points.

- a) the line through $(3, -2)$ and $(-1, 2)$

b) Find the slope of the line with the ordered pairs

X	2	5	8	11
y	1	6	11	16

Try it!

a) Find the slope of the line with the ordered pairs

X	-6	-4	-2
y	-3	-1	1

b) Finding the slope of the line through (2,-5) and (-3,-5)

Example 3

In point-slope form, write the equation of the line that contains the points in the table

x	-3	-1	1	3
y	1.5	1	0.5	0

Point-slope form

Slope-intercept form

Try it!

Write the equation of each line in slope-intercept form

a) with slope -5 through (1,3)

b) through (-2,-3) and (2,5)

Parallel Lines – If both slopes are defined, the slopes of parallel lines are equal. The slopes of parallel vertical lines are undefined.

Perpendicular Lines - If both slopes are defined, the slopes of perpendicular lines are opposite reciprocals. Their product is -1. A vertical line and a horizontal line are perpendicular.

Example 4

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

a) parallel to $y = 1.5x + 6$ and through (4,5)

b) perpendicular to $y = -\frac{3}{4}x + 2$ and through (6,-4)

Try it!

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

c) parallel to $y = 5x - 3$ and through (1,4)

b) perpendicular to $y = \frac{5}{6}x - 7$ and through (0,-2)

