

Warm up

Write an equation of the line in slope intercept form.

1. The slope is 3, the y-intercept is -2

$$y = 3x - 2$$

2. The slope is 0, the y intercept is 4.

$$y = 4$$

$$y = 0x + 4$$

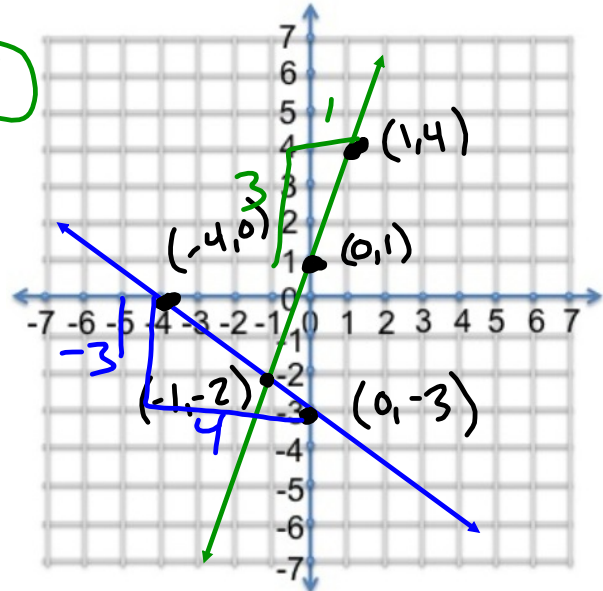
Write an equation of the lines shown.

a) $m = \frac{-3}{4}$ $b = -3$

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

b) $m = 3$ $b = 1$

$$y = 3x + 1$$



week 11

Homework Questions?

On the top of your paper (by your name) rate yourself for this section:

4 - I can summarize the concepts and explain it to others

3 - I can apply the concept to answer questions correctly

2 - I can apply the concepts but with some mistakes

1 - I need help and know how to apply the concept

0 - I can't apply the concept, even with help

Rating of 0-2 is a warning signal to me that you need help

Ch.4 Test

65 pts

58.5 - A

52 - B

45.5 - C

41.5 ↓

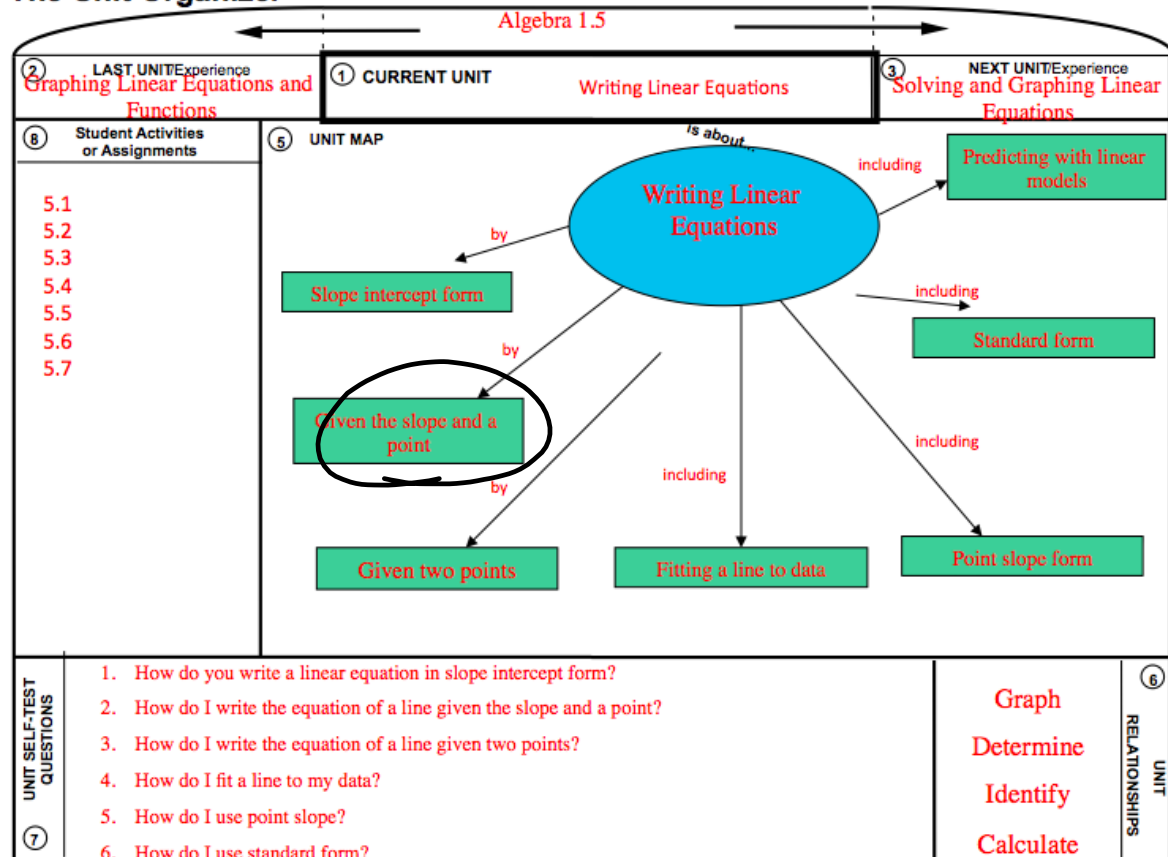
Retake

5.2 Writing Linear Equations Given the Slope and a Point

Goal: • Use the slope and any point on a line to write an equation of the line.

EQ: Write the equation of the line that is parallel to $y = 3x + 5$, and passes through $(2, -1)$.

The Unit Organizer



Step 1: Find the y-intercept $\rightarrow b$

- Substitute the slope, m , and the point (x, y) into $y = mx + b$
- Solve for b .

Step 2: Write in slope-intercept form: $y = mx + b$

- Substitute the slope, m , and the y-intercept b .

Example 1: Writing an Equation of a Line

Write an equation of the line that passes through the point $(-3, 5)$ and has a slope of 2.

$$y = mx + b$$

$$5 = 2(-3) + b$$

$$5 = -6 + b$$

$$+6 \quad +6$$

$$11 = b$$

$$m = 2$$

$$y = mx + b$$

$$y = 2x + 11$$

Try It

Write an equation of the line that passes through the point and has the given slope. Write the equation in slope-intercept form.

1. $(2, 4), m = 2$

$y = mx + b$

$4 = 2(2) + b$

$4 = 4 + b$

$-4 \quad -4$

$0 = b$

$y = 2x + 0$

or
 $y = 2x$

2. $(-3, 2), m = -3$

$y = mx + b$

$2 = -3(-3) + b$

$2 = 9 + b$

$-9 \quad -9$

$-7 = b$

$y = -3x - 7$

3. $(-5, -1), m = \frac{1}{2}$

$y = mx + b$

$-1 = \frac{1}{2}(-5) + b$

$-1 = -\frac{5}{2} + b$

$+\frac{5}{2} \quad +\frac{5}{2}$

$\frac{3}{2} = b$

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

5.2 p. 282

12-30 even