

Objective:

YOU WILL GRAPH LINES USING
SLOPE-INTERCEPT FORM.

GRAPHING USING M & B

~~Agenda~~

WARM-UP

hw Check

Notes (p. 55)

homework

**Quiz
Monday!!!**

WARM-UP

1. If $f(x) = 3x - 4 - x$, then find $f(-6)$

$$f(-6) = 3(-6) - 4 - (-6) = -16$$

2. Solve the following equation for y. Then name the slope and the y-intercept.

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

$$4x + 2y = 12$$

$$-4x \quad -4x$$

$$\frac{2y}{2} = \frac{-4x + 12}{2}$$

$$y = -2x + 6$$

$$m = -2$$

$$b = (0, 6)$$

Answers:

1. $y = \frac{1}{3}x - 3$

2. $y = 8x + 2$

3. $y = 0.5x + 3.5$

4. $y = -3$

5. $y = 5x$

~~6. $y = \frac{1}{2}x + 7$~~
~~7. $y = -\frac{1}{2}x + 2$~~

6. $y = -\frac{4}{5}x + 6$

$y = -3x + 2$

7. $m = -3$
 $b = 2 \text{ or } (0, 2)$

e. $y = \frac{1}{2}x + 6$

$m = \frac{1}{2}$
 $b = (0, 6)$

9. $y = 4x + 5$
 $m = 4$
 $b = (0, 5)$

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

12. $m = \frac{2}{3}$

$b = -4 \text{ or } (0, -4)$

13. $m = -3$

14. $m = 0$

13. $-\frac{3}{2}$

14. $y = 1200 - 4x$
 $y = -4x + 1200$

Algebra I - Unit 3: Topic 2 – Slope-Intercept Form

Practice – Slope-Intercept Form**pp 334-337**

Name _____ Date _____ Period _____

Write the equation (function rule) that describes each line in slope-intercept form.

1. Slope = $\frac{1}{3}$ and y -intercept: (0, -3)

2. y -intercept: (0, 2) and $m = 8$

3. Slope = 0.5 and y -intercept: (0, 3.5)

4. $b = -3$ and slope = 0

5. $m = 5$ and y -intercept: (0, 0)

6. $b = 6$ and $m = \frac{-4}{5}$

Solve the following for y then identify the slope and the y -intercept

7. $-3y = 9x - 6$

8. $\frac{-1}{2}x + y = 6$

$m = \underline{\hspace{2cm}}$
 $b = \underline{\hspace{2cm}}$

slope = $\underline{\hspace{2cm}}$
 y -intercept = $\underline{\hspace{2cm}}$

9. $4x - y = -5$

10. $2x - 3y = 12$

slope = $\underline{\hspace{2cm}}$
 y -intercept = $\underline{\hspace{2cm}}$

$m = \underline{\hspace{2cm}}$
 $b = \underline{\hspace{2cm}}$

11. What is the slope of the function
 $-6x - 2y = 8$?

12. What is the slope rate of change of the function
 $y = -7$?

$m = 0$

$y = \underline{m}x + b$

13. Find the slope of the line identified by
 $3x + 2y = 6$.

14. Brian began the day with 1200 dvd's to rent. If he rented the dvd's at a rate of 4 an hour, write an equation in slope-intercept form to represent this situation.

$y = 1200 - 4x$

$y = -4x + 1200$

p.55

GRAPHING USING M & B

$y = mx + b$

You ^begin with the point you know (y-intercept). Then use the slope "m", to rise and run to move & make another point.

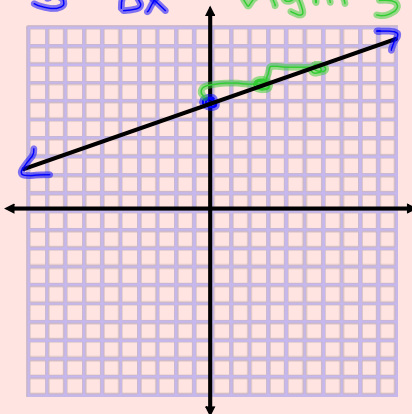
$+m \rightarrow$ UP
 $-m \rightarrow$ DOWN

RIGHT

1. Graph the line with the given characteristics.
 $m = \frac{1}{3}$, y-intercept (0, 6)

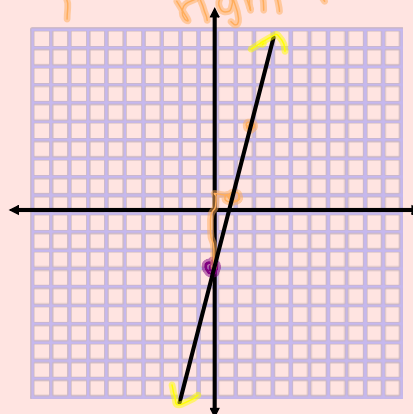
$$+\frac{1}{3} = \frac{\Delta y}{\Delta x}$$

move up 1
 right 3



2. $m = 4$, $b = -3$ (0, -3)

$\frac{4}{1}$ up 4
 right 1



FOR PROBLEMS 3-4, WRITE EACH EQUATION IN SLOPE-INTERCEPT FORM AND GRAPH

the line described by the equation.

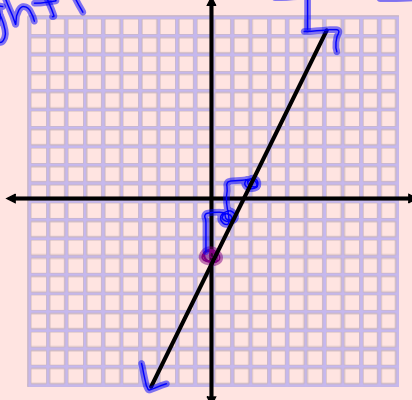
3. $2x - y = 3$

$$-2x \quad -2x$$

$$-y = -2x + 3$$

$$y = 2x - 3$$

up 2
 right 1



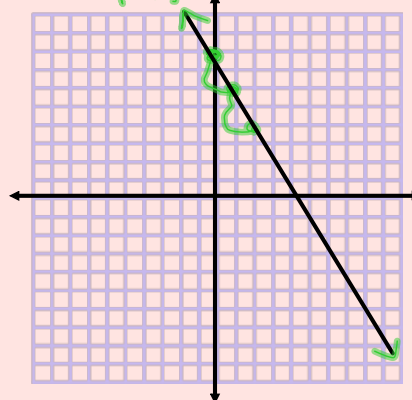
4. $2x + y = 8$

$$-2x \quad -2x$$

$$y = -2x + 8$$

$$m = -2 \quad b = 8$$

down 2
 right 1



HW Due Monday (Quiz!!)

Algebra 1- Unit 3: Topic 2

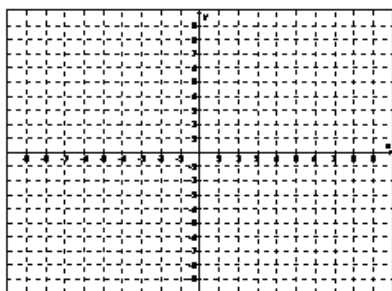
Practice – Graphing Using m and b

pp 334-340

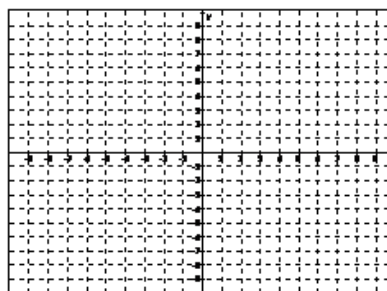
Name _____ Date _____ Period _____

Graph the following using the given characteristics.

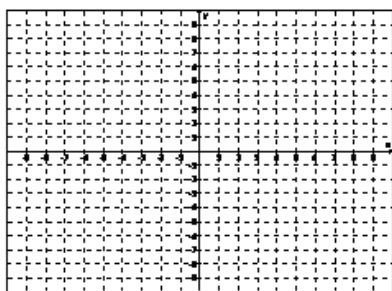
1. $m = -\frac{1}{2}, b = -1$



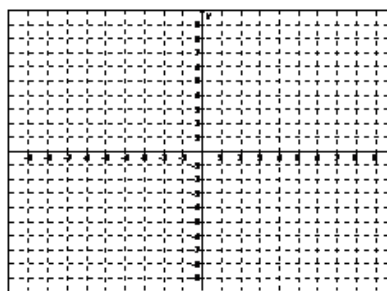
2. $m = \frac{2}{3}, b = -1$



3. $m = \frac{1}{2}, b = 6$

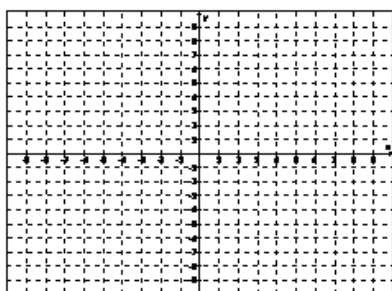


4. $m = -5, b = -3$

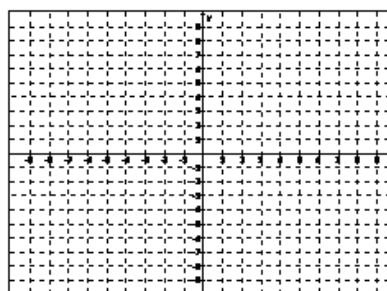


For problems 5-8, write each equation into slope-intercept form. Then graph the line described by the equation.

5. $-3x + 4y = -16$

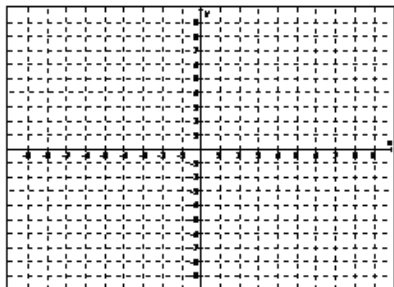


6. $\frac{1}{3}x + y = 4$

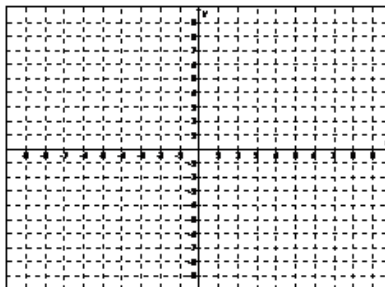


Algebra 1- Unit 3: Topic 2

7. $-x - y = -9$



8. $4x - 3y = 15$

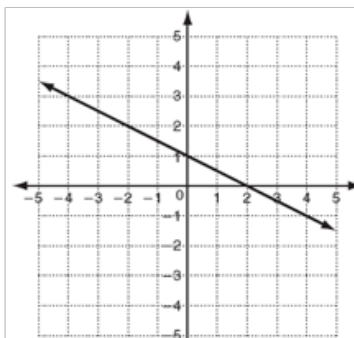


For problems 9 and 10, given the graph, find the slope and the y -intercept and write the equation of the line.

9. $m =$

$b =$

$y =$



10. $m =$

$b =$

$y =$

