

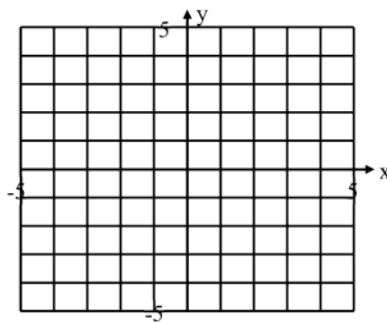
Lesson 2 – Graphing Linear Functions Using a Table of Values and Slope-Intercept Form ($y=mx+b$)

Example 1

For each of the equations below, make a table of values and graph the function. Use these graphs to determine the slope and y-intercept. Explain how these values can be seen in the equations.

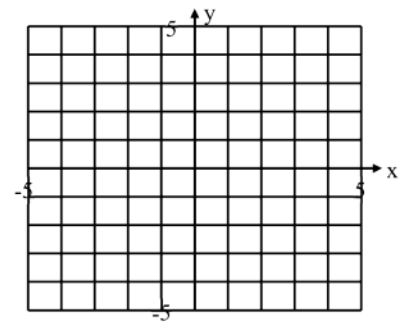
$y = 2x - 1$

x	y



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

x	y



Example 3:

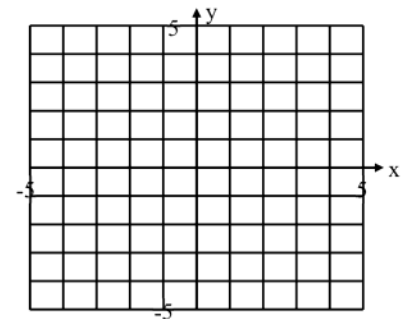
State the slope and y-intercept for the line represented by

a) $y=-4x+7$

b) $3x+2y=-12$

Example 4:

Write an equation of the line whose slope is $\frac{2}{3}$ and y-intercept is 1, then graph.

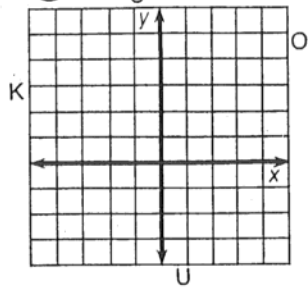


Assignment: Worksheet “Whom Should You See....” and Pg.

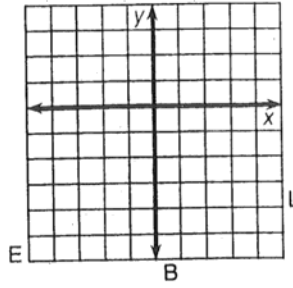
Whom Should You See at the Bank If You Need To Borrow Money?

Use the slope and y -intercept to graph each equation below. The graph, if extended, will cross a letter. Print this letter in each box that contains the number of that exercise.

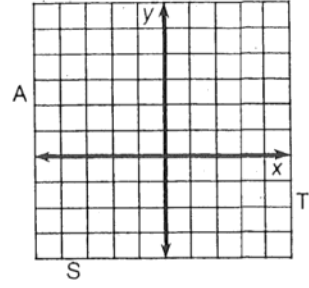
① $y = \frac{2}{3}x + 1$



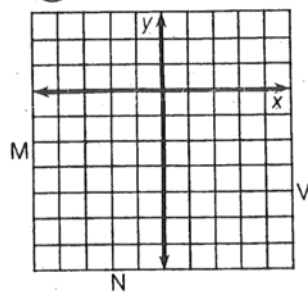
② $y = \frac{1}{2}x - 3$



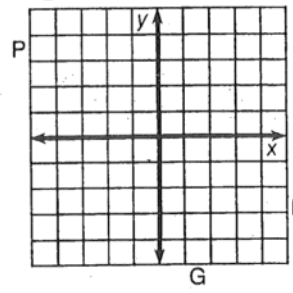
③ $y = -\frac{3}{4}x + 2$



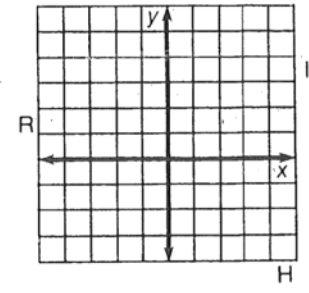
④ $y = 2x - 4$



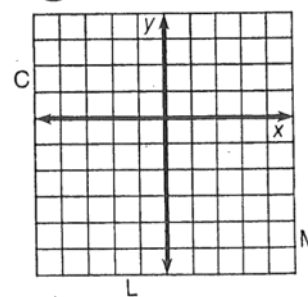
⑤ $y = -3x - 1$



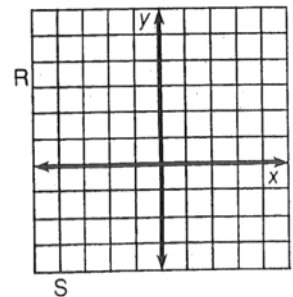
⑥ $y = -\frac{3}{2}x + 3$



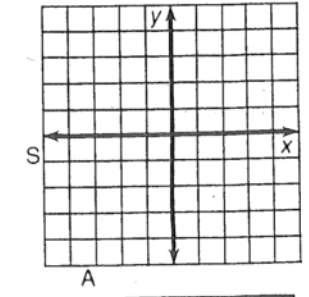
⑦ $y = 4x - 2$



⑧ $y = -\frac{1}{4}x + 2$



⑨ $y = \frac{5}{3}x$



3	6	2	7	1	9	4	9	8	8	9	4	5	2	8
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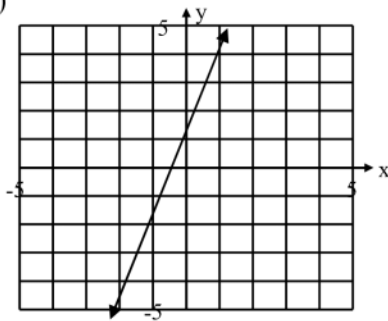
OBJECTIVE 5-j: To graph a line given its equation in slope-intercept form. © 1989 Creative Publications 155

Lesson 3 – Graphing Linear Equations using Slope-Intercept Form $y=mx+b$ Part 2

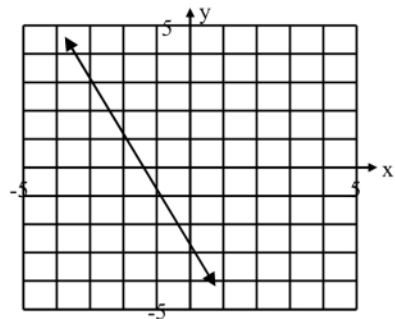
Example 1:

Determine the equation of each line given the graph.

a)



b)

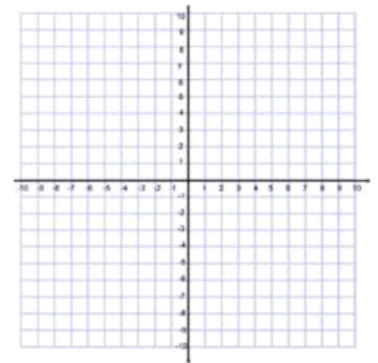


Example 2:

Consider the equation $y = 2x + b$. What is each value of b if a graph of the line passes through each point? Solve graphically and algebraically.

a) (1,7)

b) (-3,-5)

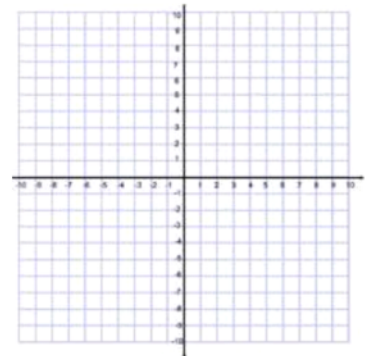


Example 3:

Consider the equation $y = mx - 3$. What is each value of m if a graph of the line passes through each point? Solve graphically and algebraically.

a) (1,7)

b) (-3,-5)

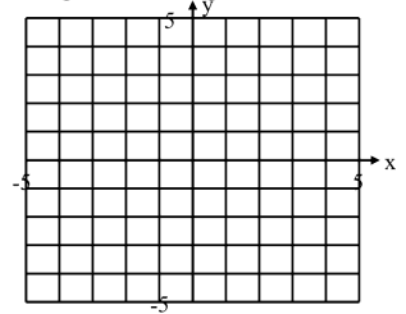


Example 4:

Considering the following points, write the equation of a line, in slope-intercept form, that passes through both points.

a) $(-2,5)$ $(-5,-3)$

b) $(-1,2)$, $(5-4)$



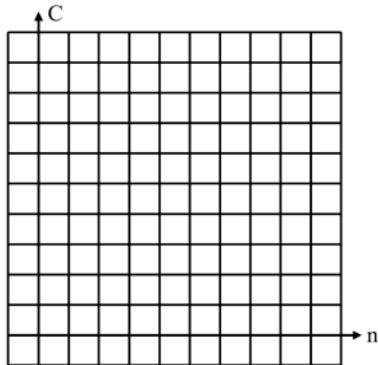
Example 5:

Asha has selected a hotel for her wedding reception. The cost involves a fee for the deluxe ballroom and a buffet charge that depends on the number of guests. This is shown in the table.

Number of Guests	Cost (\$)
0	425
25	1800
50	3175
100	5925

a) What are the slope and y-intercept of the line? What does each **parameter** represent?

a) Sketch a graph of the data in the table.



b) Write an equation that describes the relationship between the cost and the number of guests. Express the equation in slope-intercept form.

c) What is the cost of 140 guests?

d) Asha would like the total cost to be no more than \$15 000. What is the maximum number of guests that can attend?

Assignment: Equation of a Line Worksheet; Pg. Quiz on The Equation of a Line on _____

GRAPHING LINEAR EQUATIONS

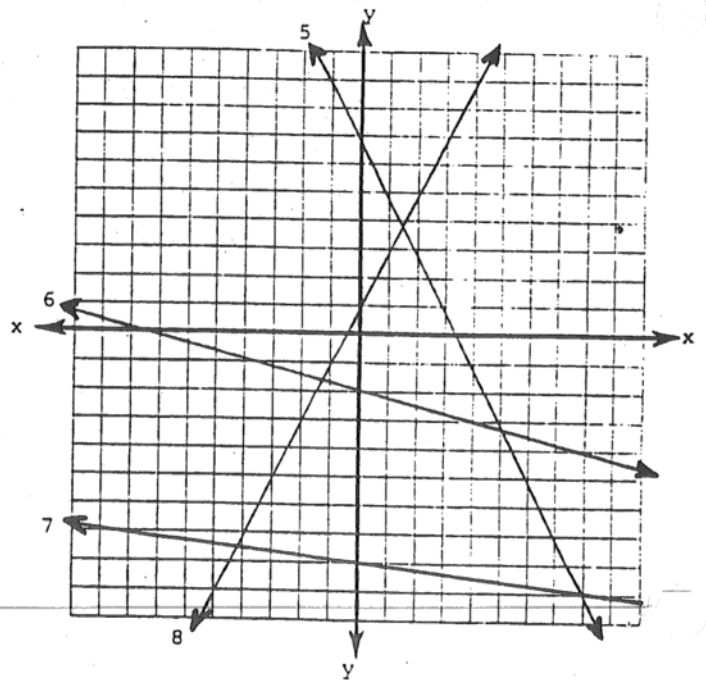
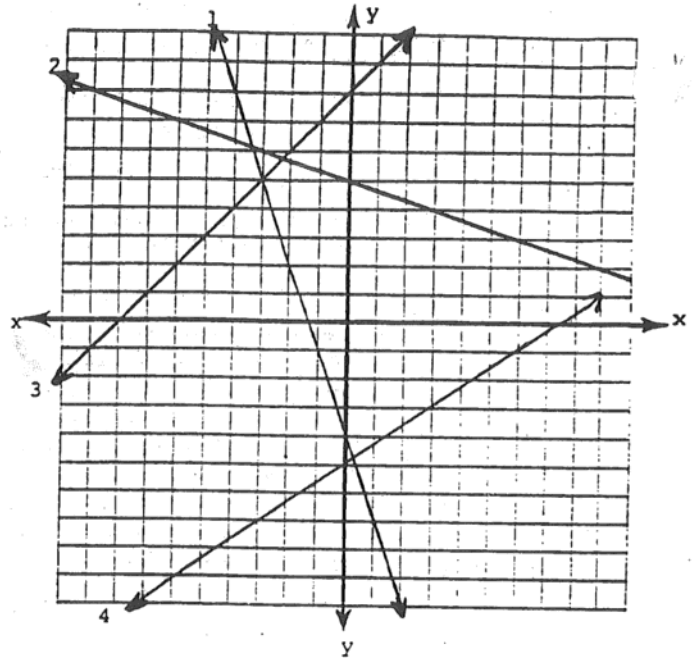
NAME: _____ DATE: _____

EXERCISE:-

Find the equation for each line on the graphs to the right.

HINT:

Find the slope, m , and y -intercept, b



28.

Name: _____ Date: _____

Section 7.1 Extra Practice

1. What are the slope and y-intercept of each line?

a) $y = 5x - 3$ b) $y = 0.1x - 5.7$

2. Sketch the graph of each line using the slope and y-intercept.

a) $y = 2x + 3$

b) $y = -\frac{1}{2}x - 4$

3. Express each equation in slope-intercept form. Determine the slope and y-intercept of each line.

a) $4x + 5y - 20 = 0$

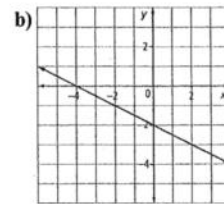
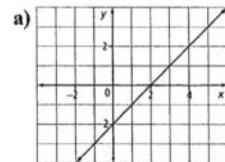
b) $5x - y = 12$

4. Write the equation of each line in the form $y = mx + b$.

a) $m = 2$, y-intercept: $(0, -5)$

b) $m = -6$, y-intercept: $(0, 2)$

5. What are the slope and y-intercept of each line? Write the equation of each line in the slope-intercept form.



7. Write the equation of each line in the form $y = mx + b$.

a) The slope is 2. The line passes through the point $(1, 4)$.

b) The y-intercept is -3 . The line passes through the point $(-2, 6)$.

Graph #2 in Graph below

