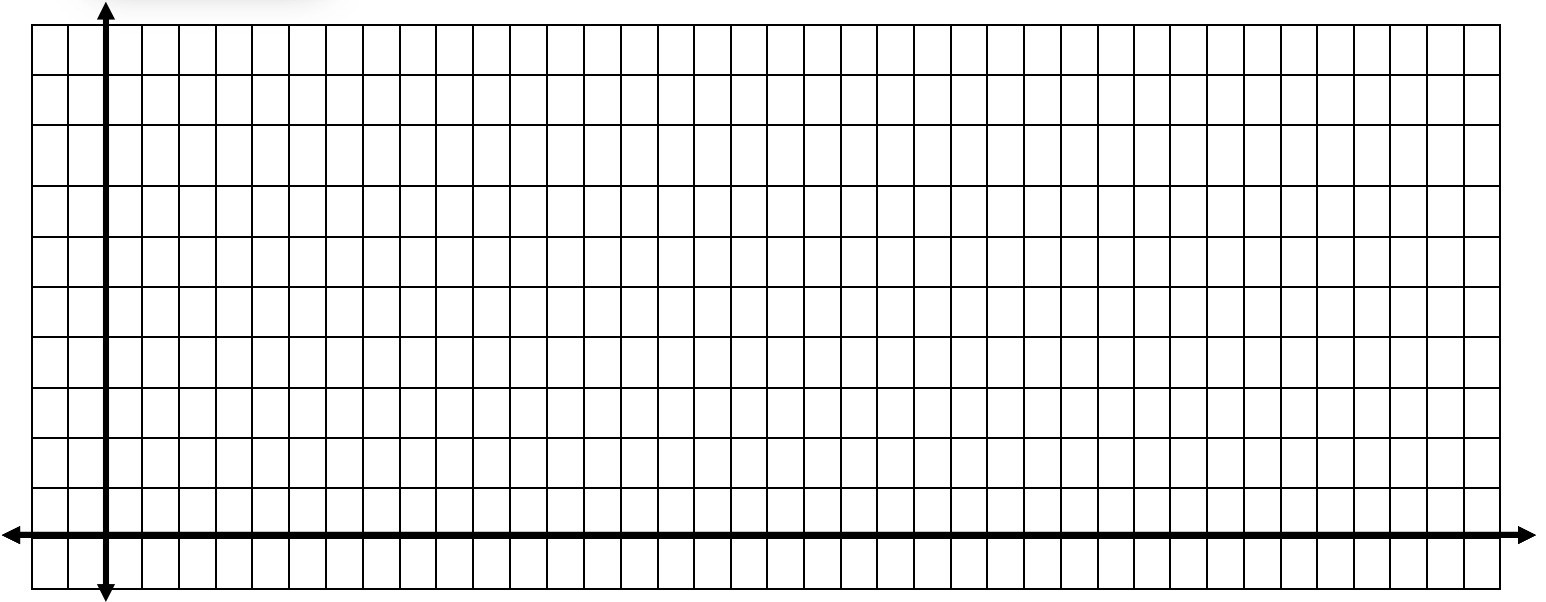


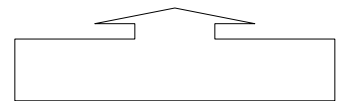
5.3A ~ SLOPE - INTERCEPT FORM (PART A)



Emma just received a very cool text-only cell phone for her birthday. She has a basic plan that minimizes her cost, and keeps her from being too text-happy. The price: \$5.00 per month, plus \$0.10 per text message.



Let's find the **slope** of this line: _____ Where does this line **cross the y-axis**? _____



The **equation** for this line is: $y =$ _____ or $y =$ _____

When an

Writing equations and graphing lines

A Write an equation of a line given its **slope & y-intercept**. Graph it.

Let's do one together:

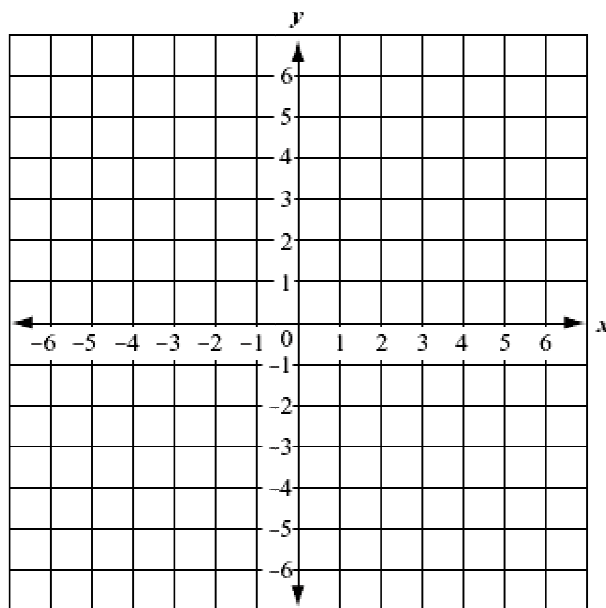
Slope: _____ **y-intercept:** _____

(1) Write the equation: _____

(2) Graph the y-intercept. This is the 1st point.

(3) Start at the y-intercept and use the slope to find another point that lies on the line. This is your 2nd point. *Optional: repeat to find a 3rd point.*

(4) Draw the line that goes through both (or all) of these points.

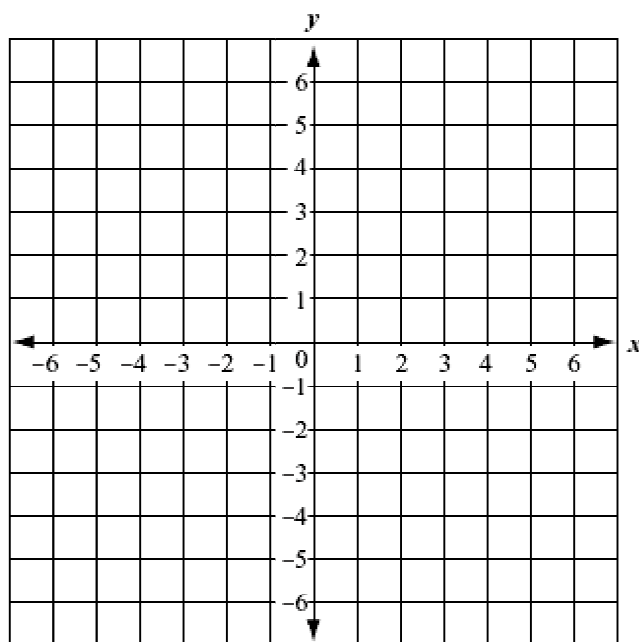


Your turn...

Slope: _____ **y-intercept:** _____

(1) Write the equation: _____

Follow steps (2) – (4) above.



B Write an equation of a line given **two points**. Graph it.

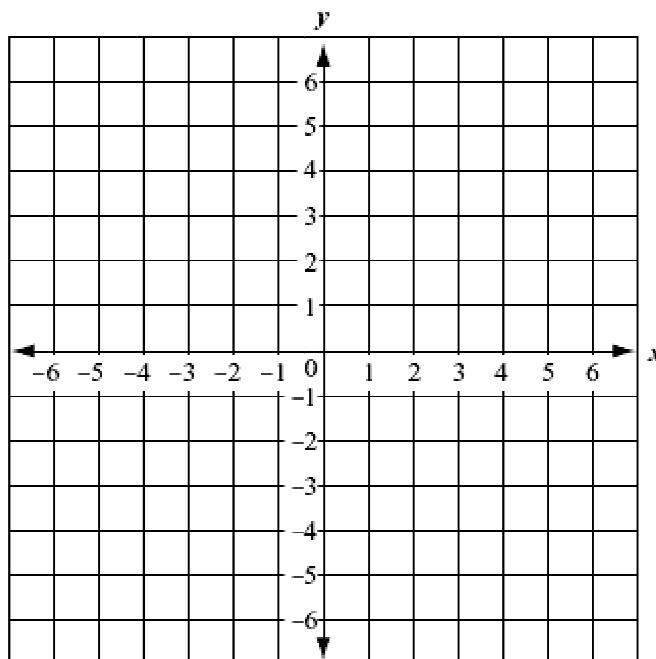
Point 1: _____ **Point 2:** _____

(1) Graph the points. Draw the line.

(2) Find the Slope of the line. _____

(3) Look for the y-intercept. _____

(4) Write equation (slope-intercept form)



Your turn...

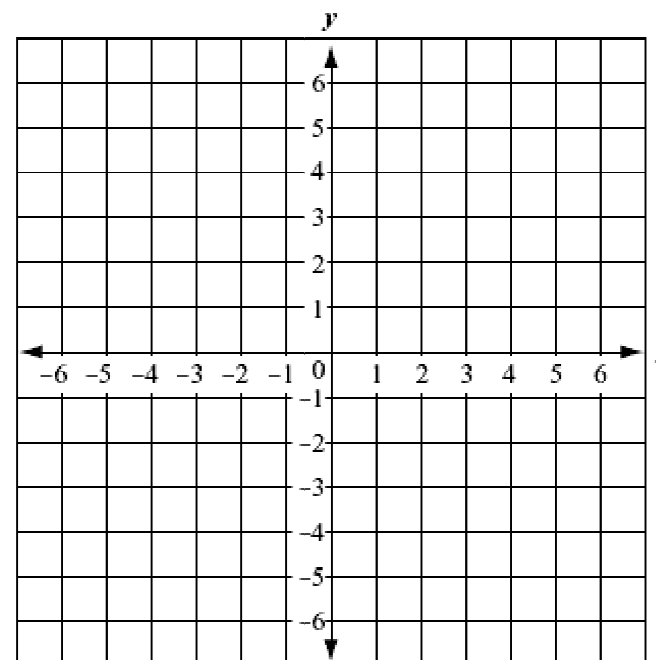
Point 1: _____ **Point 2:** _____

(1) Graph the points. Draw the line.

(2) Find the Slope of the line. _____

(3) Find the y-intercept. _____

(4) Write equation (slope-intercept form)





Given a linear equation in **slope-intercept form**, graph it!

Together...

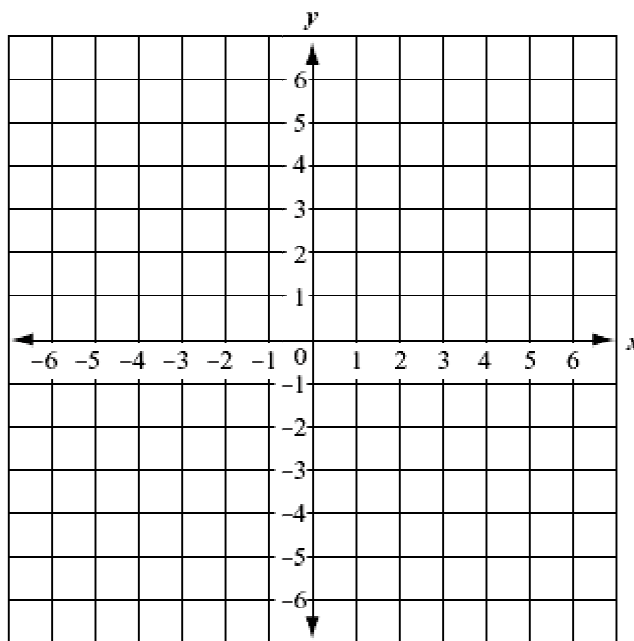
Equation: _____

(1) Find Slope: _____ y-intercept: _____

(2) Graph the y-intercept. This is the 1st point.

(3) Start at the y-intercept and use the slope to find another point that lies on the line. This is your 2nd point. *Optional: repeat to find a 3rd point.*

(4) Draw the line that goes through both (or all) of these points.

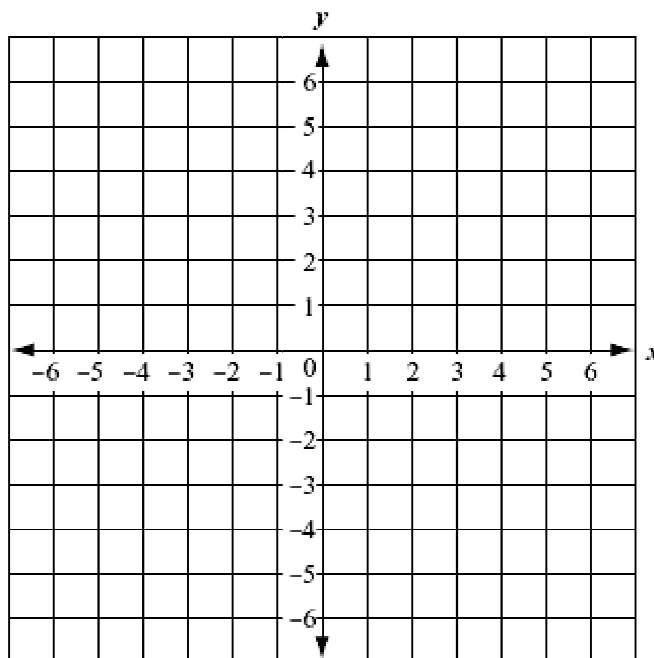


Your turn...

Equation: _____

(1) Find Slope: _____ y-intercept: _____

Follow steps (2) – (4) above.





Given an equation in **standard form**, rewrite it in slope-intercept form and graph it!

Together...

Equation: _____

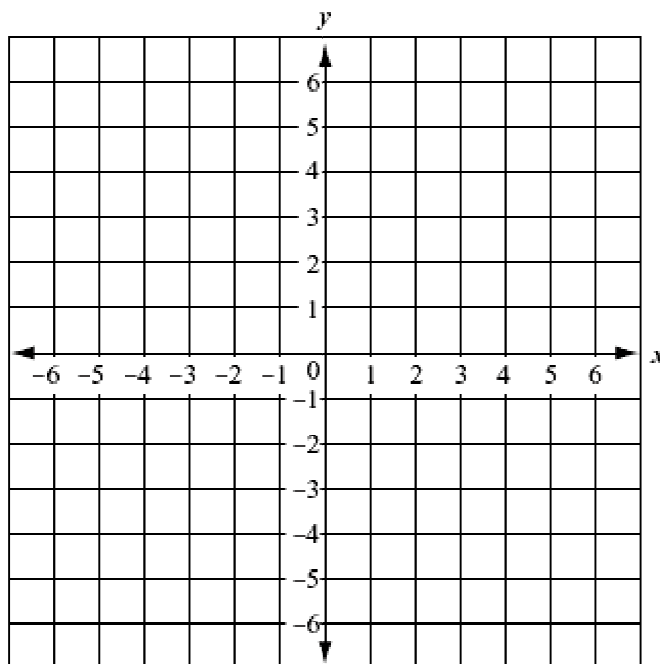
(1) Convert to Slope-Intercept form.

(2) Find Slope: _____ y-intercept: _____

(3) Graph y-intercept. This is the 1st point.

(4) Start at the y-intercept and use the slope to find another point that lies on the line. This is your 2nd point. *Optional: repeat to find a 3rd point.*

(5) Draw the line that goes through both (or all) of these points.



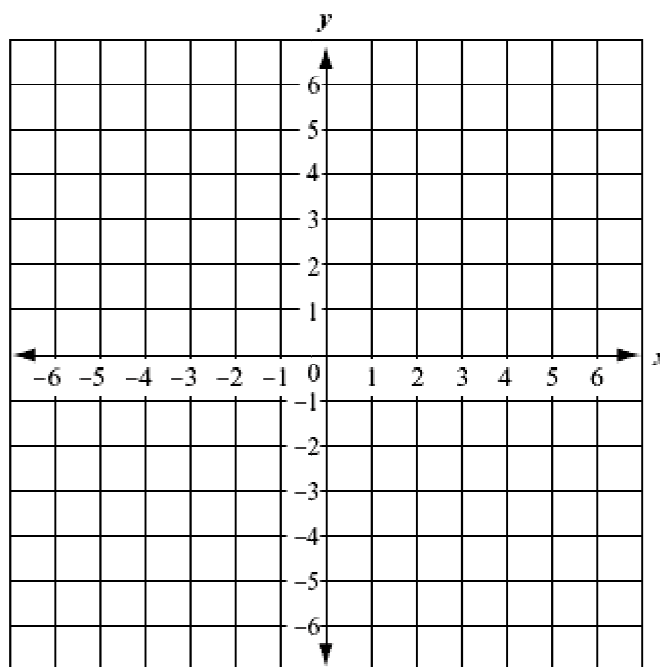
Your turn...

Equation: _____

(1) Convert to Slope-Intercept form.

(2) Find Slope: _____ y-intercept: _____

Follow steps (3) – (5) above.



5-3**In-class Practice**

Find the slope and y-intercept of the graph of each equation.

1. $y = 3x - 5$

2. $y = -5x + 13$

3. $y = -x - 1$

4. $y = -11x + 6$

5. $y = -5$

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

Write an equation of a line with the given slope m and y-intercept b .

10. $m = -1, b = 3$

11. $m = 4, b = -2$

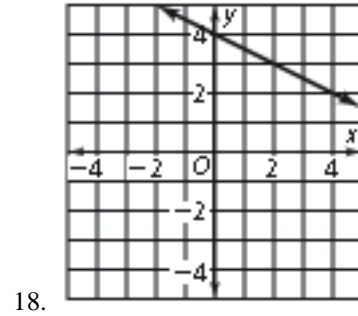
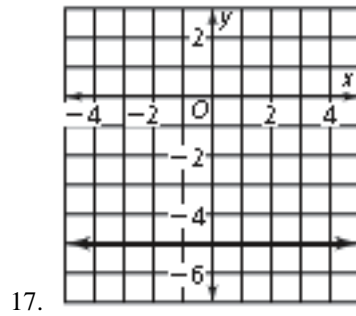
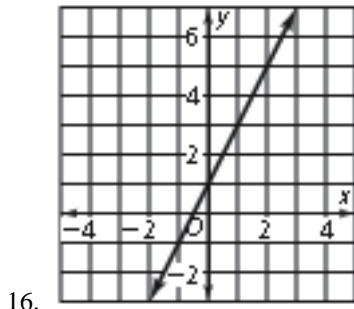
12. $m = -5, b = -8$

13. $m = 0.25, b = 6$

14. $m = 0, b = -11$

15. $m = 1, b = \frac{3}{8}$

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



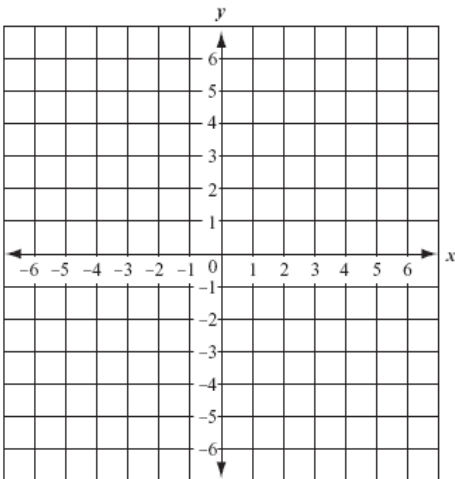
Write an equation in slope-intercept form of the line that passes through the given points.

19. (3, 5) and (0, 4)

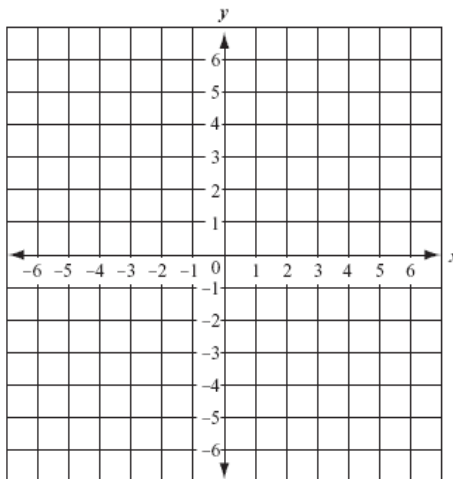
24. (0, -1) and (5, 6)

Graph each equation.

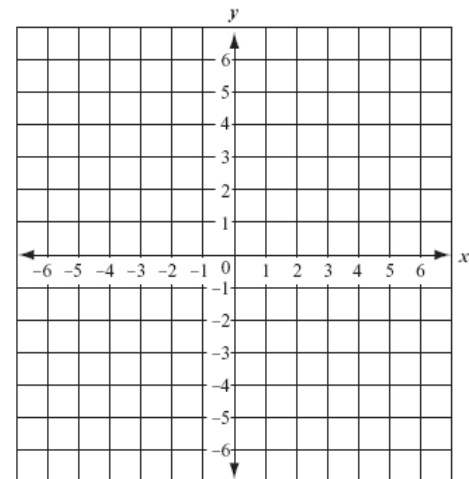
28. $y = x + 3$



29. $y = 4x - 1$



30. $y = -x + 6$



5-3**HW: Do All Exercises****Slope-Intercept Form**

Find the slope and y-intercept of the graph of each equation.

1. $y = -2x + 7$

2. $y = 6x + 11$

3. $y = -7x - 8$

4. $y = -2.5x + 3.2$

5. $y = -9$

6. $y = \frac{1}{4}x - \frac{2}{7}$

Write an equation of a line with the given slope m and y-intercept b .

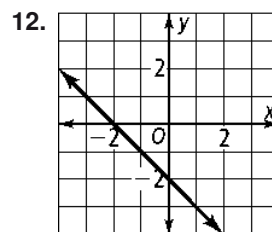
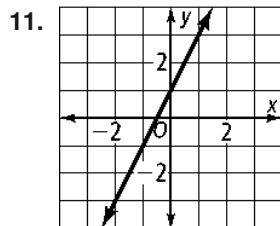
7. $m = -5, b = -6$

8. $m = 1, b = -4$

9. $m = 0.4, b = -9$

10. $m = 0, b = 3$

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



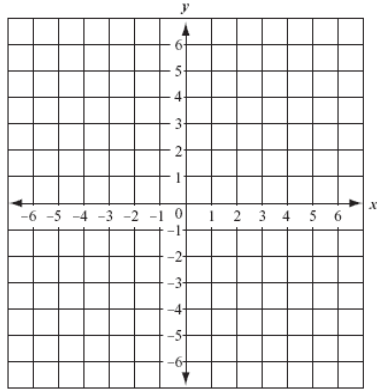
Write an equation in slope-intercept form of the line that passes through the given points.

13. $(-1, 2)$ and $(0, 0)$

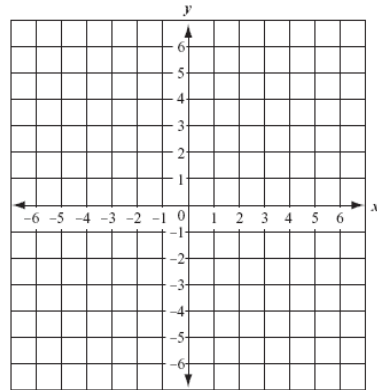
14. $(0, 3)$ and $(4, 6)$
Note: This answer is not online.

Graph each equation.

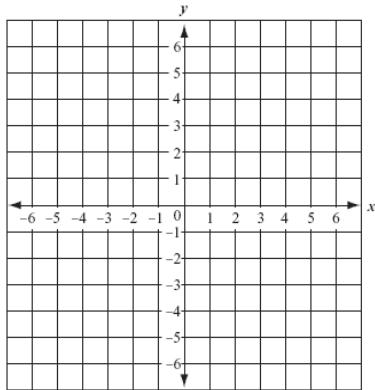
17. $y = x - 2$



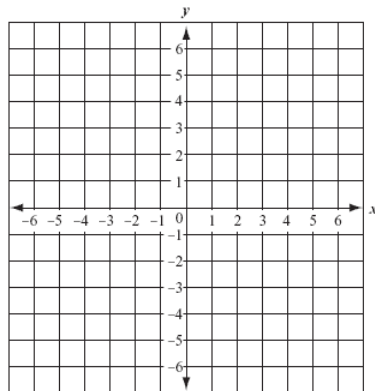
18. $y = 3x + 1$



19. $y = -x - 1$



20. $y = -3x - 2$



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

