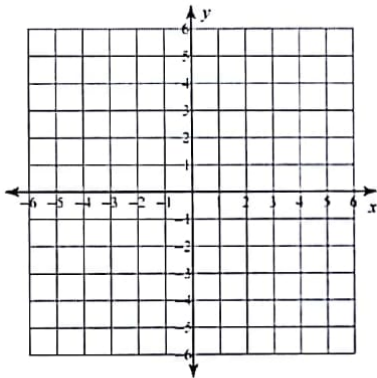


Section 2.2– Equations of Lines

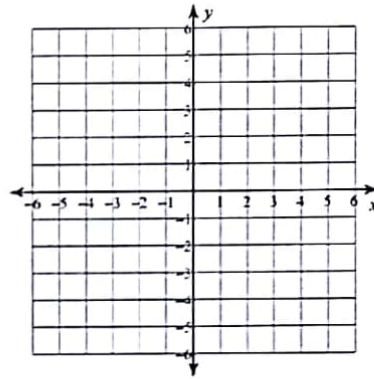
Slope-Intercept Form

Example - Graph each of the following lines.

1) $y = \frac{7}{2}x - 2$



2) $y = -6x + 3$

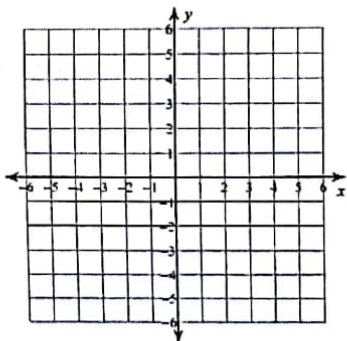


Special Lines

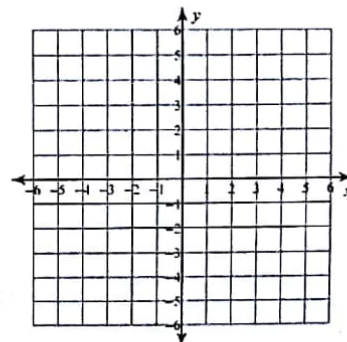
Horizontal Lines	Vertical Lines

Example – Graph each of the following lines.

3) $y = -5$



4) $x = 2$



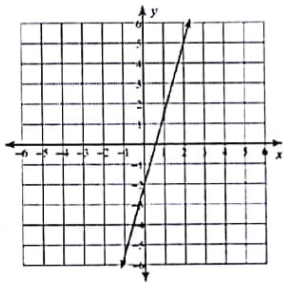
Writing Linear Equations in Slope-Intercept Form

Examples – Write each of the following in Slope-Intercept Form.

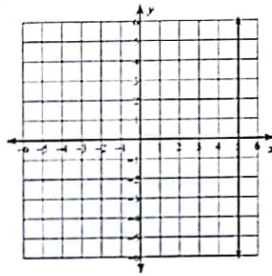
5) $2x + 4y = 8$

6) $4y - x = 16$

7)



8)



Applications – Write each of the following in Slope-Intercept Form. Show work.

1) $3x - 2y = -16$

2) $13x - 11y = -12$

3) $9x - 7y = -7$

4) $x - 3y = 6$

5) $6x + 5y = -15$

6) $4x - y = 1$

7) $11x - 4y = 32$

8) $11x - 8y = -48$

Standard Form

Slope = y-intercept =

Examples – Write each of the following in Standard Form.

9) $y = 5x + 2$

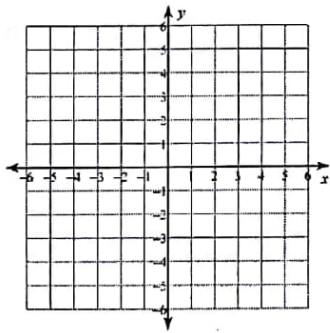
10) $y = -2x - 40$

Examples – For each of the following equations, find the x-intercept and the y-intercept.

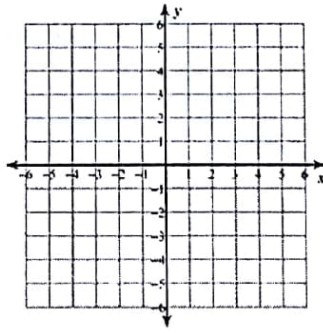
11) $3x + 2y = 6$

12) $-3x + 6y = 18$

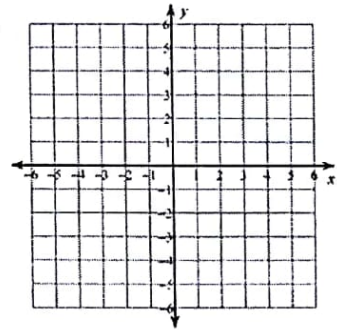
Examples – Graph each of the following lines.



13) $3x + 2y = 6$



14) $y = -3x + 2$



15) $-2x + 6y = 12$

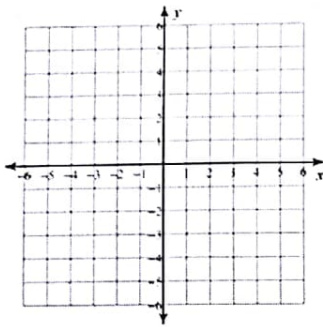
Applications – Find the x-intercept and y-intercept for each of the following equations.

1) $8x - 4y = 12$

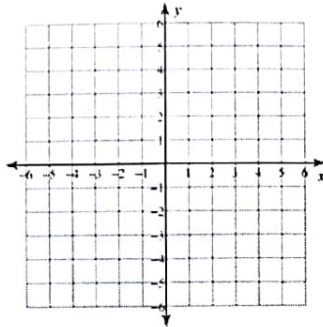
2) $x - 3y = 6$

3) $11x - 8y = -48$

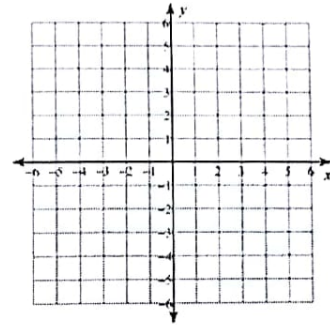
Applications (cont.) – Graph the following lines.



4) $2y - 5x = 10$



5) $3x + y = 6$



6) $y = -2$

Point-Slope Form

Examples – For each of the following, write an equation of the line in Point-Slope Form.

16) $(9, 3)$ $m = 5$

17) $(-2, 4)$ $m = -1/2$

18) $(0, 2)$ $m = -2$

All 3 Forms of Linear Equations

Name: _____

Identify A, B, C Find the Slope and y-intercept. Graph the line.

1) $7x + y = 5$

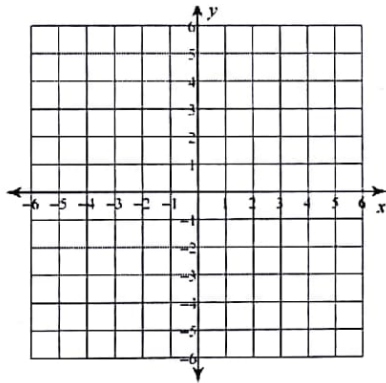
A=

B=

C=

Slope:

y-int:



2) $3x + 5y = -5$

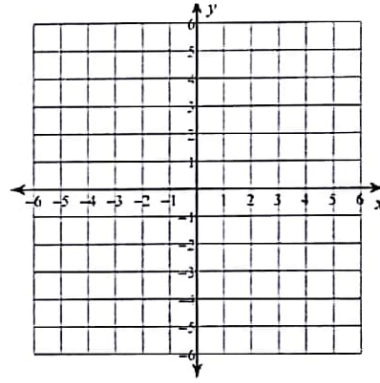
A=

B=

C=

Slope:

y-int:



3) $y = 4$

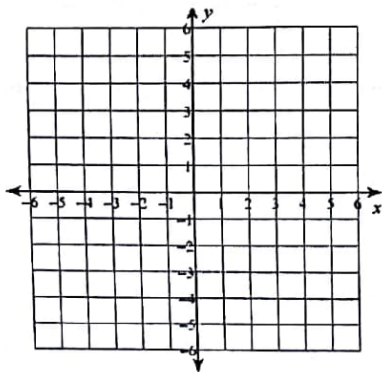
A=

B=

C=

Slope:

y-int:



4) $6x + 5y = 20$

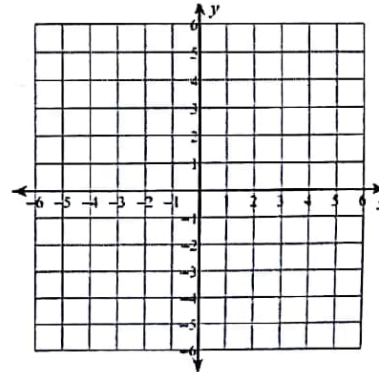
A=

B=

C=

Slope:

y-int:



Identify A, B, C Find the Slope and y-intercept. Graph the line.

5) $x = -3$

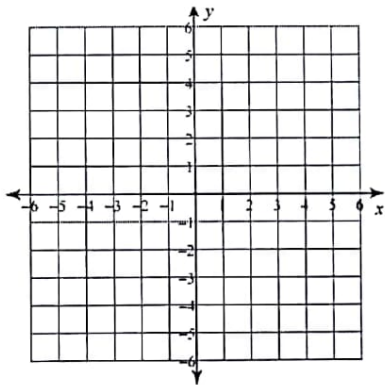
A=

B=

C=

Slope:

y-int:



6) $2x + y = 4$

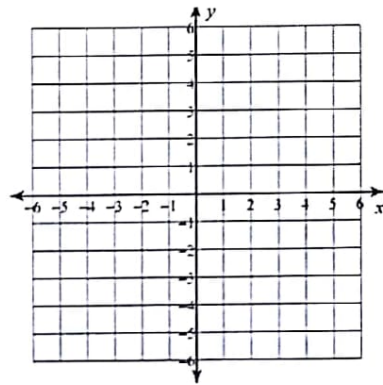
A=

B=

C=

Slope:

y-int:



7) $x + y = 3$

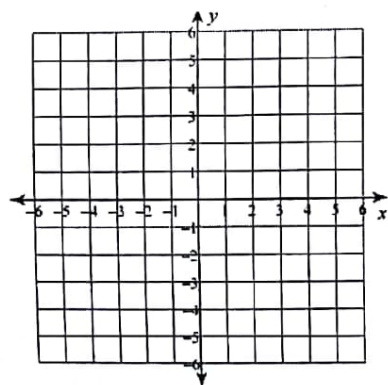
A=

B=

C=

Slope:

y-int:



8) $10x - 3y = 15$

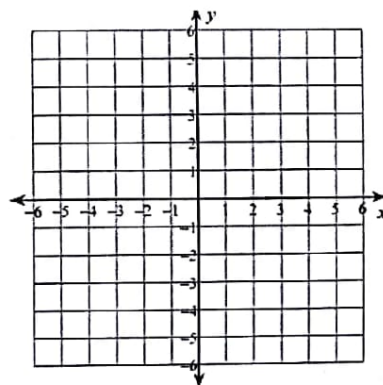
A=

B=

C=

Slope:

y-int:



Write the equation to find the **slope**:

Write the equation for **point-slope** form:

Write the equation for **slope-intercept** form:

Write the equation for **standard form**:

For each of the following 1. Write the equation of line in point-slope form. 2. Convert the point-slope form to slope-intercept form. 3. Convert slope-intercept to the standard form.

1. $(2, 2) m = -3$

2. $(1, -6) m = -1$

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

4. $(1, 3) m = -\frac{3}{4}$

5. $(-8, 5) m = -\frac{2}{5}$

6. $(3, -3) m = \frac{1}{3}$

7. A construction company charges \$15 per hour for debris removal, plus a one-time fee for the use of a trash dumpster. The total fee for 9 hours of service is \$195.

a. Write the point-slope form of an equation to find the total fee y for any number of hours x .

b. Write the equation in slope intercept form.

c. What is the fee for the use of a trash dumpster?

8. There is a daily fee for renting a moving truck, plus a charge of \$0.50 per mile driven. It costs \$65 to rent the truck on a day when it is driven 48 miles.

a. Write the point slope form of an equation to find the total charge y for a one-day rental with x miles driven.

b. Write the equation in slope-intercept form.

c. What is the daily fee?

9. To take dance classes, the school charges a one-time flat fee plus a fee per lesson. The cost for 7 dance lessons is \$82. The cost for 11 lessons is \$122.

a. What is the cost per lesson?

b. Write the point-slope form of an equation using 7 lessons and \$82 for your ordered pair.

c. Write the equation in slope-intercept form.

d. What is the flat fee?