Warm Up **12/12/18**

1. Amy has a collection of dimes and quarters. Her collection has 36 coins and is worth $5.40. How many of each coin does she have?

d = # of dimes q = # of quarters

$-.10(d + q = 36)$

$.10d + .25q = 5.40$

$-.10d - .10q = -3.60$

$+ \quad .10d + .25q = 5.40$

$.15q = 1.80$

$\frac{.15q}{.15} = \frac{1.80}{.15}$

$q = 12$

12

36 − 12 = 24 dimes

2. Solve: $-2x - y = 12$

$+ \quad 9x + y = -26$

$7x = -14$

$\frac{7x}{7} = \frac{-14}{7}$

$x = -2$

$-2(-2) - y = 12$

$4 - y = 12$

$-4 \quad -4$

$-y = 8$

$\frac{-y}{-1} = \frac{8}{-1}$

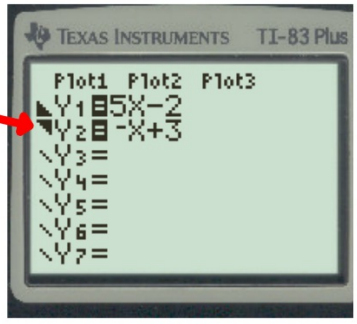
$y = -8$

$(-2, -8)$

Graphing Inequalities on the Calculator

Steps to Graph on the Calculator

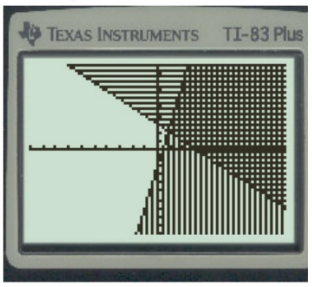
1. Enter inequalities into the Y= screen
2. Set the shading to the left of the inequalties



◣ Less than
Less than or equal to

◥ Greater than
Greater than or equal to

3. Graph the inequalities (Use Zoom 6)



4. The overlapping region are the solutions

Identify the quadrants where the solutions are located:

1. $y > 4x - 3$
   $y > 2x + 1$

2. $y < -x - 9$
   $y > x + 3$

3. $y < 4/5x - 2$
   $y > -1/2x$

Try These!

1. $y < 3/4x - 2$
   $y > -3/2x + 3$

2. $y > -x - 1$
   $y < x - 5$

3. $y < 6$
   $y > 2x + 5$

Systems of Inequalities:

1. Which of the following points would be a solution for the system of inequalities?

$y < 2x + 5$

$y > -3x - 1$

A. (-3, -5) B. (-6, 1)

C. (9,3) D. (-12, 10)

2. A region is defined by the system:

$y > 3x + 1$

$y \leq -2x - 4$

In which quadrant of the coordinate plane is the region located?

A. I, II, and III

B. II and III

C. III, and IV

D. I, II, III, and IV

3. $x + y \geq -3$
$5x - y \leq -3$

$y \geq -x - 3$

$y \geq 5x + 3$

Which of the following points is a solution to the system?

A. (2, 2)

B. (-2, 3)

C. (-4, -4)

D. (0, 0)

4. Which of the following points would be a solution for the system of inequalities?

$y < -3x + 4$

$x + y > 5$ $\quad y > -x + 5$

A (5,4)

B (-7,0)

C (-2,9)

D (-9, -4)

$$y = 2x + 5$$

$$y = x - 2$$

$$-$$