$\qquad$
$\qquad$ Date $\qquad$

## Thursday:

1. Look at the graph below. Create a scale and labels on the graph:


Rule for the graph you created: $\qquad$
Write a story about your graph using the labels you added:
2. $\bigcirc+\bigcirc+\bigcirc=27 \quad \bigcirc+\Delta+\Delta=21$

Find the values: $\triangle=$ $\qquad$ $\bigcirc=$ $\qquad$

## Because

$\qquad$
3. Graph the lines (on the same graph) using the slope and y-intercept.
a. $y=-3 x+3$
$\mathrm{m}=$
$\mathrm{b}=$
b. $y=2 x-2$
$\mathrm{m}=$
$b=$

At what point do these lines intersect? $\qquad$


We call this the $\qquad$ of the system.
4. Graph $y=-1 \cdot x^{2}$

Make sure you scale your $y$-axis to fit all the values:

| -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |


5.

a. Find the equation of the line above.
b. Is the point $(15,-38)$ on this line? Use math to show why or why not.

Friday:

1. Simplify:
a. $-x y-4 x^{2}+3 x-4 x y+8 x^{2}-5 x \quad$ b. $-(3 x-y)-2 x-6 y+x$
2. A bean plant and a pea plant were planted in the same month. When the bean was bought, it was 4 inches tall and grew 5 inches per month. The pea plant was only 1 inch tall and grew 6 inches per month. Create 2 tables of the bean and pea growth and answer the questions: Bean rule Pea rule $\qquad$

| month |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Height <br> (inches) |  |  |  |  |  |  |


| month |  |  |  |  |  |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Height <br> (inches) |  |  |  |  |  |  |

a. How many months passed before each plant was the same height?
b. How tall were the plants when they were the same height? $\qquad$
c. Which plant will be taller in 10 months and why?
3. Solve; do the check step:
a. $-6 x+16=-8(x+2)$
b. $2 x+9-4 x=-(2 x-3)-6$
4. Find the slope and rule and fill in the table:

| 0 | 1 | 3 | 5 | 8 | 12 | 41 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 9 |  | 3 |  |  |  |

Slope $\qquad$
Rule $\qquad$
5.
a. What is $45 \%$ of 200 ?
b. What is one third of 84 ?
c. What is the tax on an item that is $\$ 45.50$ if the tax rate is $8 \%$

