Name _____

Date _____ Pd_____
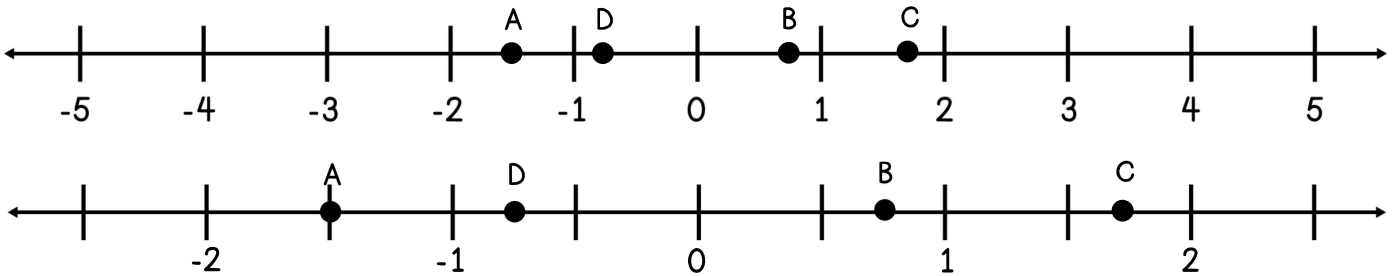
GRAPHING RATIONAL NUMBERS

Mr. Griffin asked his students to place the following numbers on both the number lines below.

| A: –1.5 | B: $\frac{3}{4}$ | C: $\frac{5}{3}$ | D: –0.75 |

After completing the activity, the students disagreed whether it was correct because they looked very different. Was the task completed correctly? Justify your thinking.

SCALE

- The scale is the number by which the axes are marked.
- The values being graphed can determine the appropriate scale to better _____ the ordered pairs.

1. Use the coordinate plane at the right to estimate the missing values in the table. Plot any missing points.

POINT	ORDERED PAIR
A	
B	$(-2, -3\frac{1}{2})$
C	
D	
E	$(3.75, 1\frac{1}{2})$
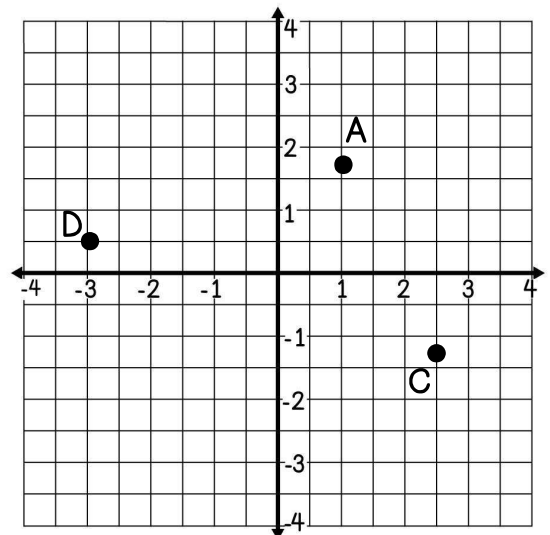
a. Which of the points on the coordinate plane satisfy the conditions x < 2 and y < 1?

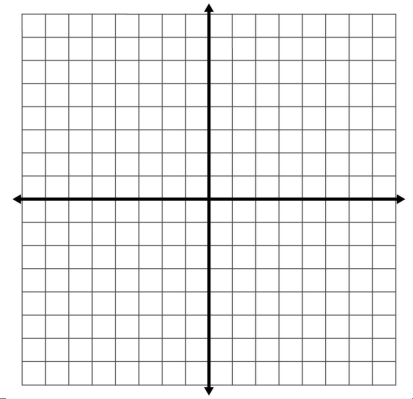b. Which of the points on the coordinate plane satisfy the conditions x > –1 and y < 1?

2. Luke is given the following numbers to plot on the coordinate plane. What should his coordinate plane extend from? By what scale should the coordinate plane count? Use the blank graph at the right to help.
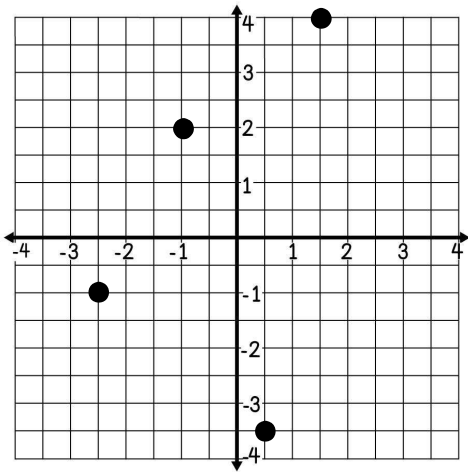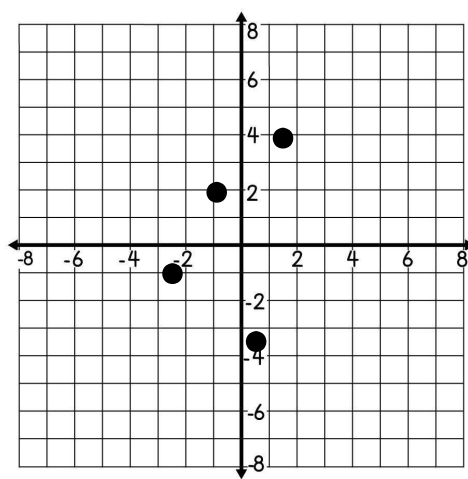
(18, 6)　　(–16, –5)　　(8, 12)　　(15, 4)

3. Keanu and Hope were asked to determine a scale for the ordered pairs listed below. Explain the difference and justify which graph you would prefer to use.

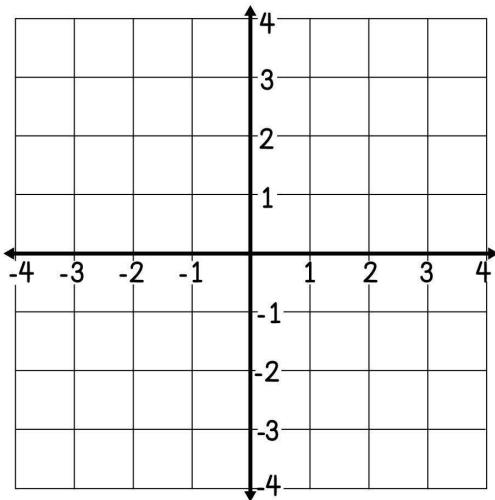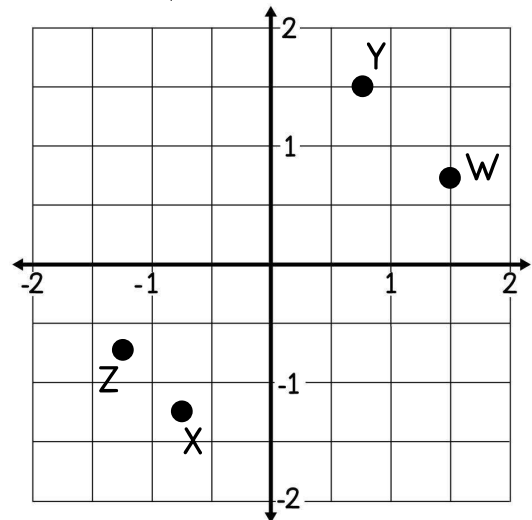$\{(1.5, 4), (-2.5, -1), (0.5, -3.5), (-1, 2)\}$

KEANU

HOPE

4. Graph and label the ordered pairs on the coordinate plane.

I:	$(-2, -3\frac{1}{2})$	J:	$(\frac{3}{2}, 2\frac{3}{4})$
K:	$(-\frac{5}{2}, 2)$	L:	$(3, -\frac{3}{2})$

5. Determine the ordered pair that best represents each point.

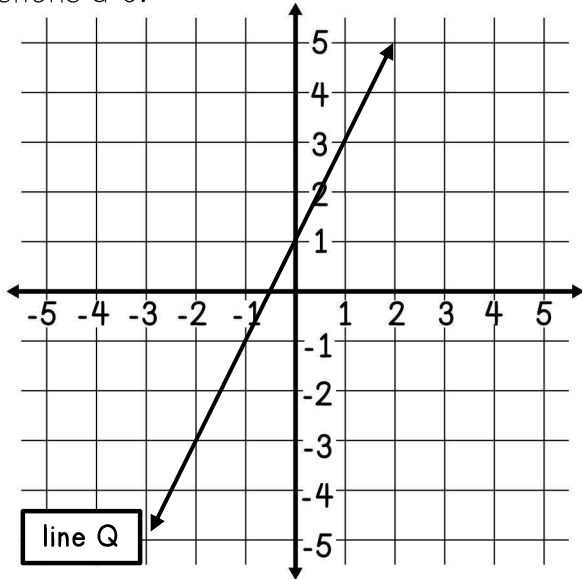| W:		X:	
Y:		Z:	

Name _____

Date _____ Pd_____

GRAPHING RATIONAL NUMBERS

Apply your understanding of coordinate planes to answer the questions below.

---

1. Use the coordinate plane below to answer questions a-e.

a. Name a point that is on line q. _____

b. Label point A at $(-2, 3\frac{1}{2})$ and point B at $(2, -\frac{3}{2})$.

c. Draw a line through A and B and label it "p."

d. Where do lines p and q intersect? _____

e. The intersection lies in what quadrant or on which axis? _____

---

2. Use the coordinate plane below to answer questions a-d.
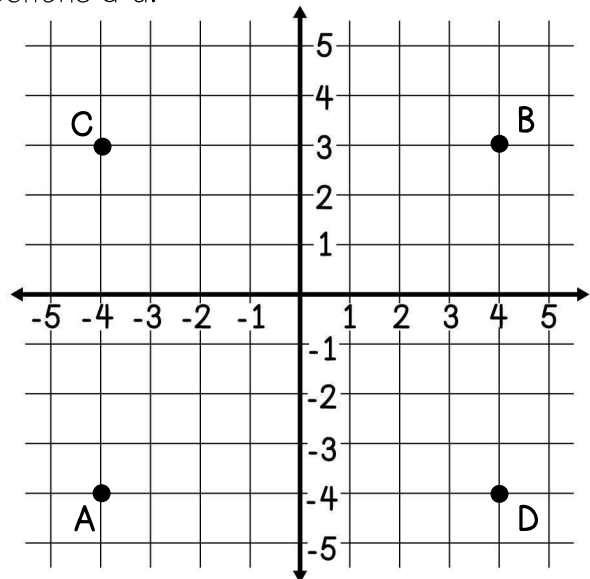
a. Determine the location of each point below:

   A: _____   B: _____

   C: _____   D: _____

b. Which points satisfy x > 3?

c. Which points satisfy y < -2?

d. Which points satisfy x > -2 and y ≥ 3?

---

3. Use the graph at the right to plot the ordered pairs below. Be sure to label the axes showing the scale you chose to best display the information.
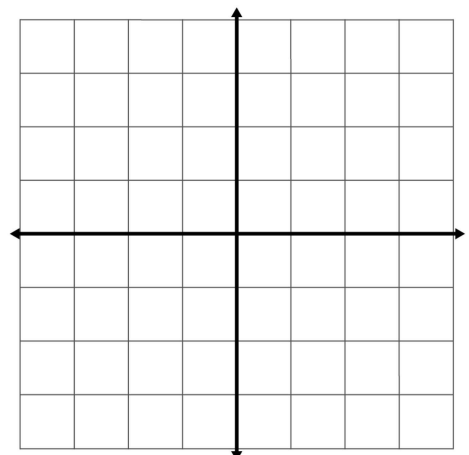
POINT A	POINT B	POINT C	POINT D
$(1, 1\frac{1}{4})$	$(\frac{3}{4}, 0)$	$(-1, -1\frac{1}{4})$	$(-1\frac{1}{2}, 0)$

a. Shade the ordered pair(s) above that satisfy x > -1 and y < 1.