Focus Area– Topic A
Module 6: Problem Solving with the Coordinate Plane

Directions: Plot A so its distance from the origin is 2.

You need to figure out the value of each tic mark that is not labeled. You can determine that the value of each is 1. Start at zero and move 2 units to the right. Plot your point above the correct tic mark.

Example 2: Plot L so its distance from the origin is 20.

First you need to figure out the value of each tic mark that is not labeled. From 35 to 50 there is a difference of 15. Divide the 15 by 3 (3 sections between 35 and 50) and you get 5. So each tic mark changes by 5.

Once you find the value of each tic mark you can then place the letter L on the line.

Example 3: What is the coordinate of point S?

First find the value of each tic mark. Since there are 6 spaces between 4 and 5, each tic mark would represent $\frac{1}{6}$.

When moving from the origin, the coordinate for point S is $4\frac{1}{6}$. 
Plotting a Coordinate Pair

Directions: How would you plot the point (2,5) on the coordinate grid?

Start at the origin and move 2 units over on the x-axis.
Then move 5 units up on the y-axis.

(2,5)

Identifying a point on a Coordinate Grid

Directions: Find the coordinate pair for point B.

Start at the origin and move along the x-axis. You will move 6 spaces on the x-axis to get to 3 units.
(Each space equals \( \frac{1}{2} \) unit.)

Then move up 2 spaces on the y-axis to get to the 1 unit.
(Each space equals \( \frac{1}{2} \) unit.)

Point B is at (3,1)

Patterns in Coordinate Pairs

Horizontal lines

Look at line \( p \), what do you notice about the 3 points and their coordinates?
The y-coordinates are all 8.

***Any time the y-coordinates are the same in a set of coordinate pairs, the line created will always be horizontal.

Patterns in Coordinate Pairs

Vertical lines

Look at line \( n \), what do you notice about the 3 points and their coordinates?
They have different y-coordinates but the x-coordinates are all 4.

***Any time the x-coordinates are the same in a set of coordinate pairs, the line created will always be vertical.

Directions: Tell the shape at each location.

a. What shape is 2 units from the y-axis and explain how you determined your answer?

I determined that each space is \( \frac{1}{2} \) unit from y-axis so I had to move 4 spaces to equal 2 units and the triangle is at that location.

b. Which shape has an x-coordinate of 0?
The parallelogram has an x-coordinate of 0.

c. Which shape is 4 units from the y-axis and 3 units from the x-axis?
The rhombus has the coordinate pair of (4,3) since it is 4 units from the y-axis and 3 units from the x-axis.