Day One - Coordinate Plane Review

Warm-Up 1:

Prompt

A.) Define the following math terms below on the right side of this slide in your own words.

- X axis
- Y axis
- origin
- Ordered pair

Write Answer Below

- X axis-
- yaxis-
- origin-
- Ordered pair-

Coordinate Plane Review:

- An ordered pair describes an exact location on the coordinate plane.
- The x-coordinate is the first number in an ordered pair and indicates movement parallel to the x-axis, or horizontally.
- The y-coordinate is the second number in an ordered pair and indicates movement parallel to the y-axis, or vertically.
- When graphing ordered pairs, you always begin at the origin.

Describe the process in which you would take to graph the ordered pairs below.

1. The ordered pair (8, 4) means that to plot the point, you will begin at (0, 0) and then move 8 units to the right and 4 units up.

2. You begin at the origin and travel 5 units to the right and then vertically 3 units. You will be at what ordered pair?

   (5, 3)
Math – Grade 6 – Week 5

Activity 1 – Write the ordered pair for each plot below on the spaces provided. Use the coordinates in the box provided for additional help.

Activity 2 – Graph the plots on the coordinate plane (quadrant one) below. Make sure you label each point.
Warm-Up 2:

Use the graph to answer questions 1 and 2.

1. Which of the statements are correct? Circle the correct answer.
   - I only
   - I and II
   - I, II and III
   - I, II and IV

2. What ordered pair best describes the location of point D?
   - (7,0)
   - (0,7)
   - (6,0)
   - (0,6)

Graphing on the coordinate plane – Review Notes
Math – Grade 6 – Week 5

**Activity 3** – Write each of the ordered to the box that describes the quadrant in which the point is located.

<table>
<thead>
<tr>
<th>Quadrant I</th>
<th>A (4, -5)</th>
<th>B (-2, 7)</th>
<th>C (11, 6)</th>
<th>D (-4, 3)</th>
<th>E (-3, -6)</th>
<th>F (7, 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quadrant II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quadrant III</td>
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<tr>
<td>Quadrant IV</td>
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</tr>
</tbody>
</table>

**Activity 4** – Graph the following ordered pairs on the coordinate plane. Be sure to label each point.

- A (0, 9)
- B (4, 3)
- C (9, 0)
- D (4, -3)
- E (6, -10)
- F (0, -6)
- G (-6, -10)
- H (-4, -3)
- I (-9, 0)
- J (-4, 3)
Warm-Up 3:
Use the graph to answer questions 1 and 2.

1. What is the ordered pair that best represents Point A?
   A. (2, -2 1/2)
   B. (2, -1 1/2)
   C. (-1 1/2, 2)
   D. (2, -2)

2. Which of the following points best represent the ordered pair (-3, 2 1/2)?
   A. Point A
   B. Point B
   C. Point C
   D. Point D

Reflections – Review Notes

What did you notice?
- The x-value remained the same and the y-value changed signs.
Activity 5 – Follow the instructions to reflect Points A, B and C on the graph below. Then write the ordered pair of the reflected point in the boxes provided.

A. Reflect Point A over the x-axis. Then, graph the new point to show the location of the new image A'.

Where is the location of the new image A' ( , )?

B. Reflect point B over the y-axis. Then graph the new point to show the location of the new image B'.

Where is the locations of the new image B' ( , )?

C. Reflect point B over the x-axis. Then graph the new point to show the location of the new image C'.

Where is the locations of the new image C' ( , )?
Activity 6 - Kara and Jared each reflected a triangle. Use the representations below to sort each statement as TRUE or FALSE.

<table>
<thead>
<tr>
<th>TRUE:</th>
<th>FALSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUE:</td>
<td>FALSE:</td>
</tr>
</tbody>
</table>

A. Jared reflected a triangle over the y-axis.  B. Kara reflected a triangle from quadrant IV.  C. Jared reflected a triangle from Quadrant III to Quadrant I  D. Kara reflected a triangle over the x-axis.  E. In Jared’s reflection, the location of F should be (-1, 8)

Activity 7 - Solve each problem below. The write the correct ordered pair for the new reflected point in the space provided using the provided choices.

### A
Point A is located at (4, 8). If point A is reflected across the x-axis, which of the following gives the correct location of A'?

- a. (4, -8)  
- b. (8, 4)  
- c. (-4, 8)

### B
Point B is located at (-9, 2). If point B is reflected across the y-axis, which of the following gives the correct location of B'?

- a. (-2, 9)  
- b. (9, -2)  
- c. (9, 2)

### C
Point C is located at (-7, -6). If point C is reflected across the x-axis, which of the following gives the correct location of C'?

- a. (-7, 6)  
- b. (7, 6)  
- c. (7, -6)

### D
Point D is located at (2, -3). If point D is reflected across the y-axis, which of the following gives the correct location of D'?

- a. (-2, 3)  
- b. (2, 3)  
- c. (-2, -3)