Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table#: \_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_

**2.3A Reflections\_Classwork**

*Objective: Identify reflections. Reflect figures in the x-axis or the y-axis of the coordinate place. CCSS: 8.G.1, 2 and 3*

*HW: (2.3A) p. 58 #1 – 19 ODD – use handout (solutions on p. A13)*

A reflection or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a transformation in which a figure is reflected in a line called the

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. A reflection creates a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the original figure.

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| Tell whether the blue figure is a reflection of the red figure. Explain. |

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| **Example 1: Reflecting a Figure in the x-axis**  The vertices of a triangle are A(-1,1), B(-1,3), and C(6,3). Draw the figure and its reflection in the x-axis.  A’  B’  C’  Image result for graphing | **Example 2: Reflecting a Figure in the y-axis**  The vertices of a quadrilateral are P(-2,5), Q(-1,-1), R(-4,2), and S(-4,4). Draw the figure and its reflection in the y-axis.  Image result for graphing  P’  Q’  R’  S’ |
| 1. Reflect triangle ABC in the x-axis.   A(-1,3), B(2,4), C(0,5)  A’  B’  C’  Image result for graphing | 1. Reflect triangle ABC in the y-axis.   A(-1,3), B(2,4), C(0,5)  Image result for graphing  A’  B’  C’ |
| 1. Record the coordinates of and Do you notice a pattern? What happens to the coordinates of the original figure when they are reflected over the x-axis?     E ( ) E’ ( )  F ( ) F’ ( )  G ( ) G’ ( )  **Notation Rule: (x,y) 🡪** | 1. The vertices of a parallelogram are A(-1, -1), B(2, -1), C(4,-3), and D(1,-3). Draw the figure and its reflection in the x-axis. What are the coordinates of the images?     A’: B’: C’: D’:  **Notation Rule: (x,y) 🡪** |
| 1. Record the coordinates of and Do you notice a pattern? What happens to the coordinates of the original figure when they are reflected over the y-axis?     J ( ) J’ ( )  K ( ) K’ ( )  L ( ) L’ ( )  **Notation Rule: (x,y) 🡪** | 1. The vertices of a triangle are A(1,-2), B(4,-2), and C(1,4). Draw the figure and its reflection in the y-axis. Identify the coordinates of the image.     A’: B’: C’:  **Notation Rule: (x,y) 🡪** |

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| 1. Problem similar to #3 on the 2.3A HW   A figure lies entirely in Quadrant III. If you reflect it in the y-axis, in which quadrant is the image? |  |