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 graphingP’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 graphingA’B’C’ |
| 1. Record the coordinates of $⊿EFG $and $⊿E^{'}F^{'}G^{'}.$ 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 $⊿JKL $and $⊿J^{'}K^{'}L^{'}.$ 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? |  |