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

**2.3A NOTES – Reflections**

*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 – 17 ODD – use handout*

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. “R”=Red and “B”=Blue |

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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(3,-2), B(-4,1), C(0,5)  Image result for graphing  A’:  B’:  C’: |

Notation rule for reflection in the x-axis: (*x*, *y*) ↦ ( \_\_\_\_\_\_\_, \_\_\_\_\_\_\_)

Notation Rule for reflection in the y-axis: (*x*, *y*) ↦ ( \_\_\_\_\_\_\_, \_\_\_\_\_\_\_) BACK 🡪

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| 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. 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 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?  Image result for graphing  A’: B’: C’: D’:  **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.  Image result for graphing  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? |  |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per \_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_

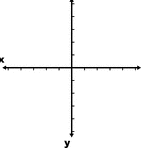
**2.3A Textbook HW**

page 58\_ #1 –17 ODD (solutions on p. A13)

DON’T FORGET TO “IDENTIFY THE COORDINATES OF THE IMAGE”

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. 5. \_\_\_\_\_\_\_\_\_\_\_\_ 7. \_\_\_\_\_\_\_\_\_\_\_\_ 9. \_\_\_\_\_\_\_\_\_\_\_



11. 13.

15. 17.