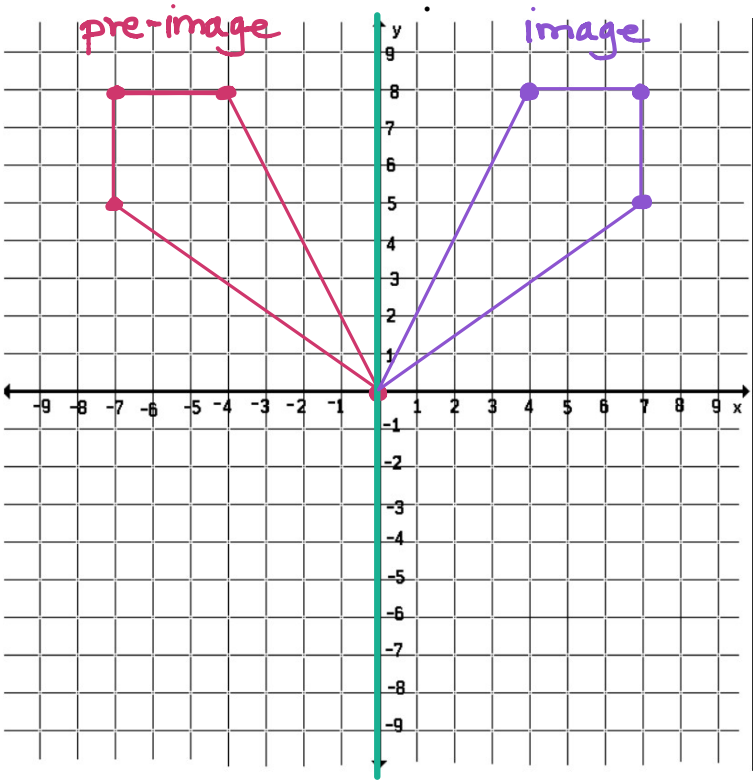
Name: Key Date: _____ Period: A B C D E F

Module 1: Topic 1 Lesson 4 Assignment

1. A REFLECTION is a rigid motion transformation that flips a figure across a line of reflection.

2. Anytime a reflection is performed, the pre-image and image **will always** be congruent.

Use the graph below to answer question 3.



3. Plot the points

a. (0, 0), (-7, 5), (-7, 8), (-4, 8) and connect them with straight lines in the order in which they are given.

b. Reflect the Quadrilateral from part a across *the* y-axis

Coordinates of Quadrilateral	Coordinates after reflection over y-axis
(0, 0)	(0, 0)
(-7, 5)	(7, 5)
(-7, 8)	(7, 8)
(-4, 8)	(4, 8)

c. Write the rule for the reflection.

(x, y)----> (-x, y)

4. Use the coordinates of the pre-image to determine how the trapezoid was reflected.

Pre-image	Image
A (-2,5)	A' (-2, -5)
B (3,-8)	B' (3, 8)
C (6, 8)	C' (6, -8)
D (-9, 5)	D' (-9, -5)

The pre-image was reflected over the X-axis.

I know this because the x-coordinates stay the same.

5. Without graphing, determine the coordinates of the image after a reflection over the x- axis.

Pre-image	Image
X (7, 2)	X' (7, -2)
Y (3,-5)	y' (3, 5)
Z (-6, 0)	Z' (-6, 0)

Write the rule for the reflection.

(x, y)----> (x, -y)

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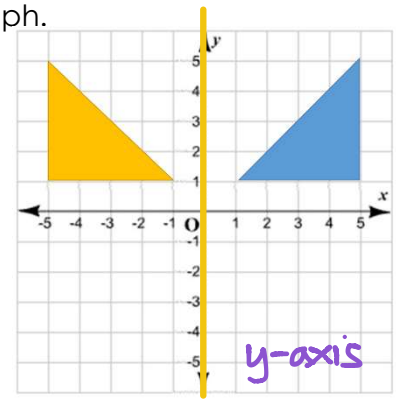
6. Use a highlighter to draw the line of reflection on this graph.



7. How can you determine the ordered pairs of the reflection over a **y-axis?**

The x-coordinates become the opposite.
The y-coordinates stay the same

REVIEW

1. The pre image is the original figure.
2. The image is the figure after the transformation.

Determine the coordinates of the image following each given translation without graphing.

3. Triangle ABC with coordinates A(2, 4) B(3, 6) C(5, 1) **is translated 4 units to the right** (x+4)

A' (6, 4) B' (7, 6) C' (9, 1)

4. Parallelogram DEFG with coordinates D(0, 2) E(1, 5) F(6, 5) and G(5,2) is **translated 7 units down** (y−7)

D' (0, −5) E' (1, −2) F' (6, −2) G' (5, −5)