YL Honors Math 2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Unit 6 Lesson 2 Homework: Reflections**

**I. Graph Each by**

 1. Reflecting the shape over the x – axis: 2. Reflecting the shape over the y - axis:

 3. Reflecting the shape over the line $x = -1$ 4. Reflecting the shape over the line $y = -x$

**II. Write the ordered pair to reflect each set of points – use your rules to help you!**

 5. $(-3, 7)$ and $(10, -2)$ over the y-axis 6. $(-6,5)$ and$ (9, -1) $over the line $y = x$

 7. $(0, -6)$ and $(-2, 5)$ over the line $y = -x$ 8. $(4, 4)$ and $(7, 2)$ over the x-axis

**III. Write a function rule to represent the transformation that would map the given domain to the given range. Describe the transformation using mathematical vocabulary.**

1. Domain: $\{U\left(-4,-4\right),V\left(-3,1\right),W\left(0,-1\right)\}$ 10. Domain: $\left\{Q\left(0,0\right),R\left(3,4\right),S\left(3,0\right)\right\}$

Range: $\{U^{'}\left(4,-4\right),V^{'}\left(3,1\right),W^{'}\left(0,-1\right)\}$ Range: $\{Q^{'}\left(0,0\right),R^{'}\left(3,-4\right),S^{'}\left(3,0\right)\}$

**IV. Quadrilateral** $A'B'C'D'$ **is a reflection of quadrilateral** $ABCD$ **across the given line.**



1. Draw line segments connecting $A$ to $A'$ and $C$ to $C'$
2. Label the points of intersection with the line of reflection as E and F.
3. Mark each statement as true or false.
	1. $A$ and $A'$ are equidistant from the line of reflection.
	2. $C$ and $C'$ are equidistant from the line of reflection.
	3. This reflection is equivalent to a $f\left(x,y\right)=(x-2,y-4)$
	4. The quadrilaterals are reflected over the line $y=-x$
	5. $\overbar{AA^{'}}∥\overbar{CC^{'}}$

**V. Review**

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1. Name the type of each given angle pair if $a∥b$ and is cut by transversal c.
	1. $∠3 and ∠5$
	2. $∠4 and ∠8$
	3. $∠8 and ∠6$
	4. $∠4 and ∠3$
2. Using the figure in #14 above, find the measure of the remaining angles if you know $m∠5=132°$.