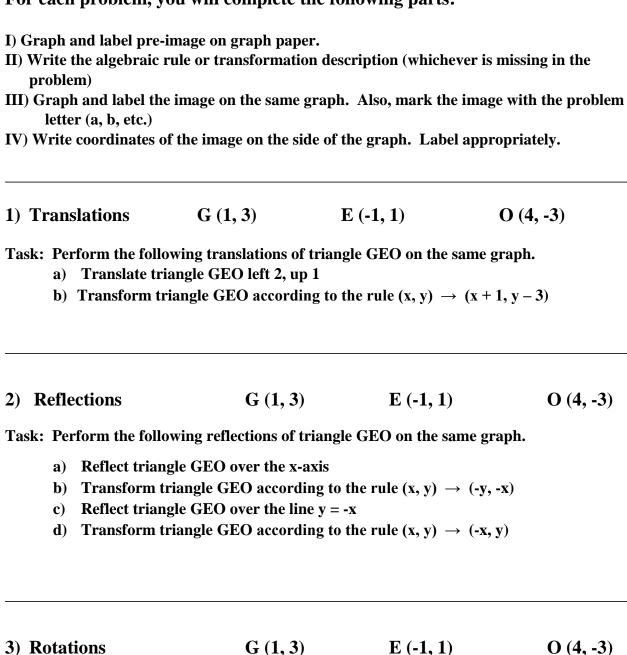
Honors Math 2 Unit 2 Transformations Review

For each problem, you will complete the following parts:



Task: Perform the following rotations of triangle GEO on the same graph.

- a) Rotate triangle GEO 90 degrees
- b) Rotate triangle GEO 90 degrees clockwise
- c) Transform triangle GEO according to the rule $(x, y) \rightarrow (-x, -y)$

4) Dilations	G(1,3)	E (-1, 1)	O (4, -3)
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Task: Perform the following dilations of triangle GEO on the same graph.

- a) Dilate triangle GEO with a scale factor of 1/2.
- b) Transform triangle GEO according to the rule $(x, y) \rightarrow (2x, 2y)$

5) Compositions
$$G(1,3)$$
 $E(-1,1)$ $O(4,-3)$

Task: Perform the following transformations of triangle GEO on the same graph.

- a) Translate triangle GEO right 2, down 1 THEN dilate by scale factor of 3
- b) Transform triangle GEO according to the rule $(x, y) \rightarrow (-y 5, -x + 2)$
- c) If f(x) represents triangle GEO, find f(-x) + 2
- d) If f(x) represents triangle GEO, find -3f(x + 4) 1

6) Domain and Range
$$G(1, 3)$$
 $E(-1, 1)$ $O(4, -3)$

Task: Perform the following based on triangle GEO on the same graph.

- a) Graph and label triangle GEO
- b) Stretch triangle GEO vertically by a factor of 3, then label appropriately.
 - I) What is the domain of the preimage?
 - II) What is the range of the preimage?
 - III) What is the domain of the image?
 - IV) What is the range of the image?

7) Matching (Match the description with the algebraic rule.)

1. Translation	$A. (x, y) \rightarrow (y, x)$	
2. Reflection over x-axis	B. $(x, y) \rightarrow (-y, x)$	
3. Reflection over y-axis	C. $(x, y) \rightarrow (ax, ay)$	
4. Reflection over y = x	D. $(x, y) \rightarrow (x, -y)$	
5. Reflection over $y = -x$	$E.\ (x,\ y) \Rightarrow (-y,\ -x)$	
6. Rotation 90 degrees counter-clockwise	F. $(x, y) \to (x + a, y + b)$	
7. Rotation 90 degrees clockwise	G. (x, y) → (-x, -y)	
8. Rotation 180 degrees (clockwise or counter-clockwise)	H. (x, y) -> (y, -x)	
9. Dilation	I. $(x, y) \rightarrow (-x, y)$	