☐ **DO NOW – Geometry Regents Lomac 2014-2015** **Date** 10/27 **due** 10/28 **Transformations on a Coordinate Grid** **2.12**

(DN) Coordinate points are written (x,y). Starting at the origin (0,0), describe how you would move to get to each point below:
(-3,7)
(5, -4)

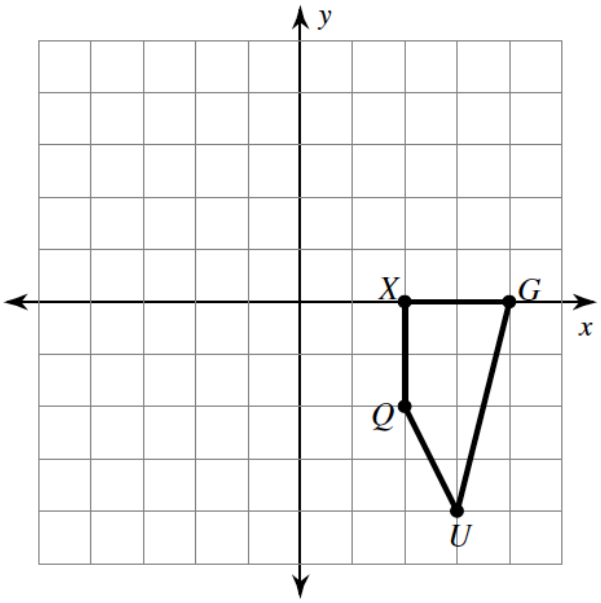
Name _____ **Per**_____
SLO: I can identify and perform transformations in the context of coordinate grids.

☐ (1) **Reflections on a grid**

☐ (a) Perform the transformation: $r_{y-axis}(XGUQ)$

☐ (b) State the coordinates of the image of (XGUQ)

_____
_____
_____
_____



☐ (c) On a coordinate grid, can you reflect precisely without construction?

_____

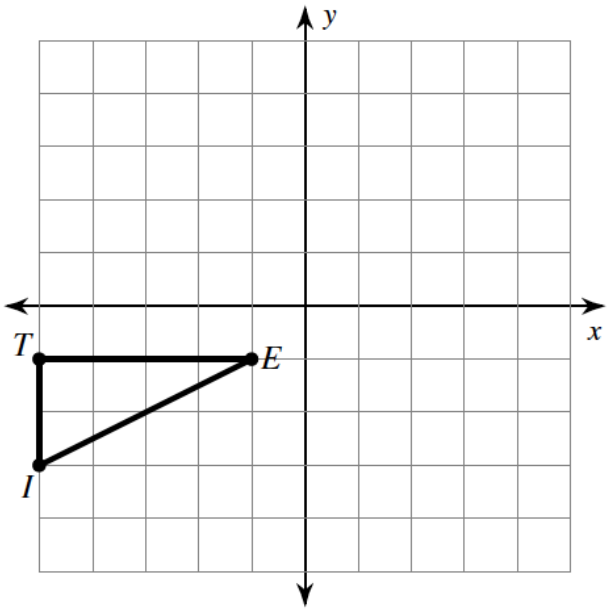
_____

☐ (2) **Reflections on a grid take 2**

Perform the transformation $r_{y=1}(\Delta TIE)$

☐ (a) What line do you need to reflect across? _____

☐ (b) Where is the line you need to reflect across?
If you are not sure, list a few points that are on the line.
(HINT: What must y be?)
(____ , ____), (____ , ____), (____ , ____), (____ , ____)
Connect the points to show the line you must reflect across.



☐ (c) State the coordinates of the image of △TIE.

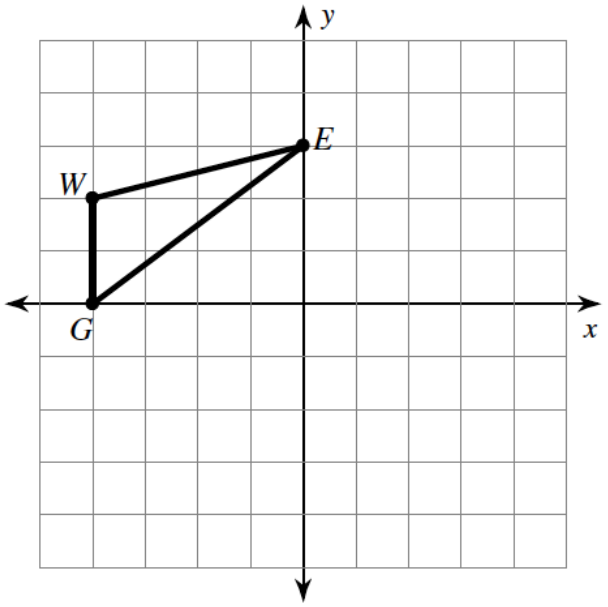
_____ _____ _____

☐ (d) What would the line x = 4 look like? _____

☐ (e) What would the line y = x look like? _____

☐ (3) **Rotations on a grid**

Perform the transformation $R_{origin,90°}(\Delta WEG)$



☐ (a) What point are you rotating around? _____

☐ (b) Which direction are you rotating?_____

How many degrees? _____

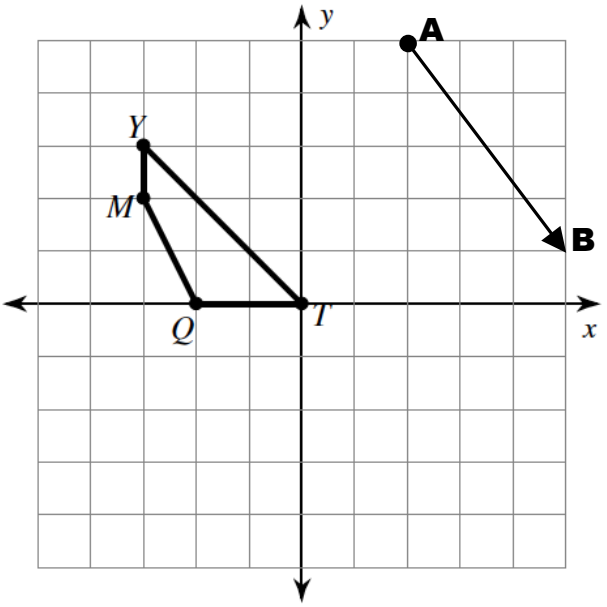
☐ (c) Perform the transformation with or without a compass.

☐ (d) State the coordinates of △WEG.

_____ _____ _____

☐ (4) **Translations on a grid**

Perform the transformation $T_{\overline{AB}}(YMQT)$



☐ (a) How will each point move along the grid?

(HINT: How does A move to B?)

_____

☐ (b) Perform the transformation with or without a compass.

☐ (c) State the coordinates of Y'M'Q'T'.

_____ _____ _____ _____

☐ (5) **Exit Ticket**

On a coordinate grid:

(a) On a coordinate grid, reflections can be performed without a compass by _____

(b) On a coordinate grid, translations can be performed without a compass by _____

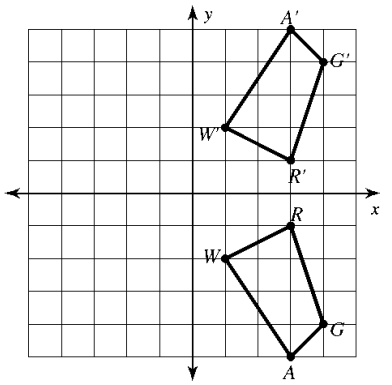
(c) On a coordinate grid, rotations can be performed without a compass by _____

☐ (6) **Homework** (next page)

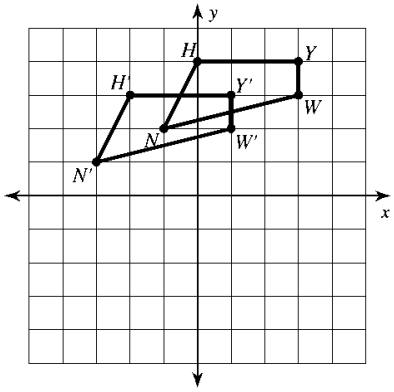
☐ (6) **Homework**

(1) Write a transformation function that will map each preimage to its image.

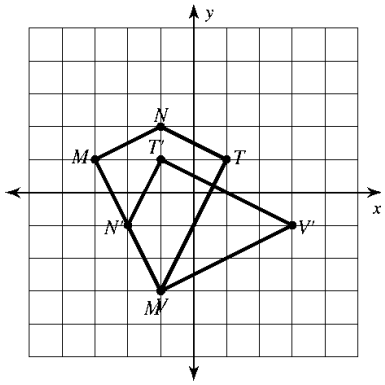
(a) _____



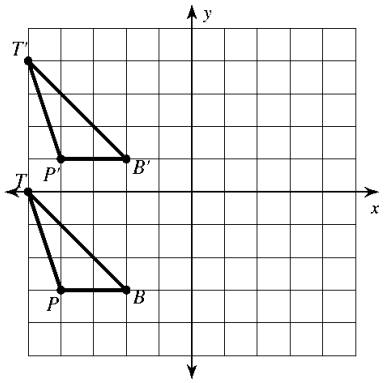
(b) _____



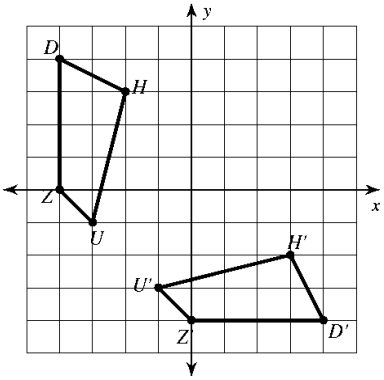
(c) _____



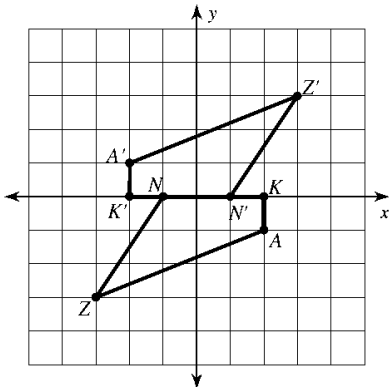
(d) _____



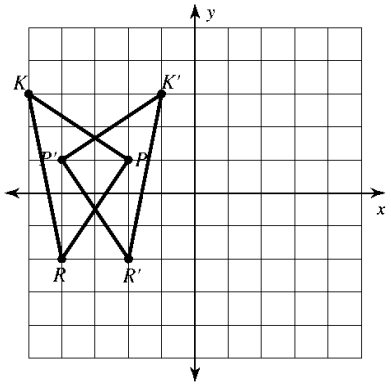
(e) _____



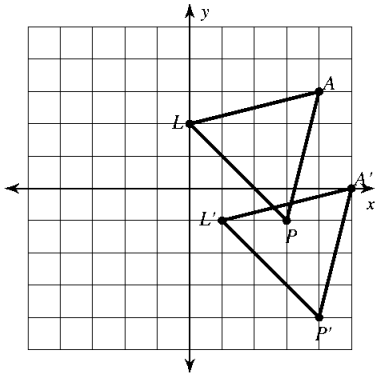
(f) _____



(g) _____



(h) _____



(i) _____