Geometry Local Lomac 2015-2016 **Date** 3/17 **due** 3/18 | **Similarity: Scale Drawings Ratio Method 11.2L**

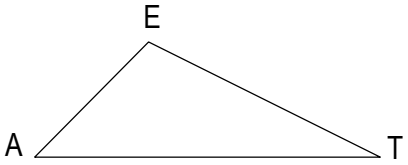
Name _____ **Per**_____

LO: I can make a scale drawing by construction or the ratio method (using dilation).

☐ **DO NOW** On the back of this packet

☐ (1) compass, straightedge **Scale drawing with the ratio method**

☐ (a) Use a compass and straightedge to construct a scale drawing of △EAT using a scale factor r = 4. Label the image EA'T'. (Which point isn't going to move?) Write the steps you take on the lines below.



Step 1:_____

_____

Step 2:_____

_____

Step 3:_____

_____

Step 4:_____

_____

Step 5:_____

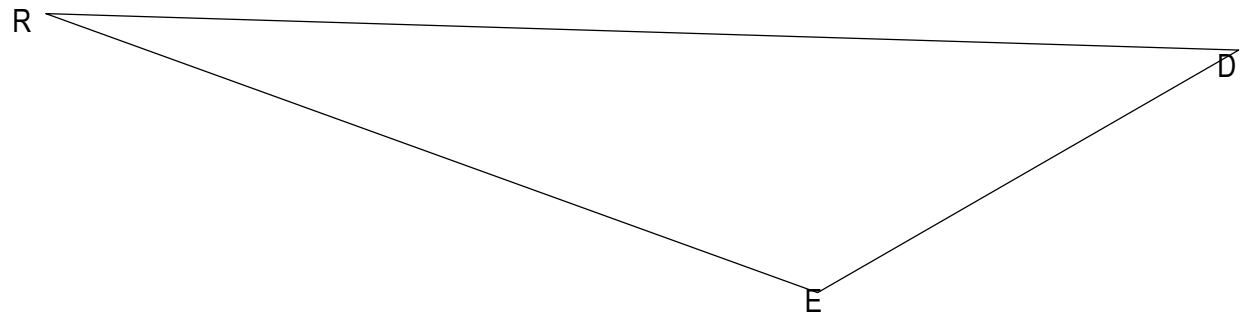
_____

Verify that you have made a scale drawing by comparing side ratios and angle measures.
(ratios of corresponding sides should be equal and angle measures should be equal)

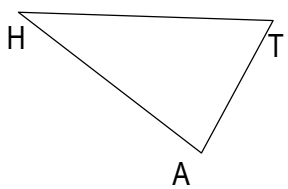
☐ (2) **Scale drawing with the ratio method**

compass, straightedge

☐ (a) Use the ratio method to make a scale drawing of △RED using a scale factor $r = \frac{1}{2}$. Label the image R'E'D. (Which point isn't going to move?)

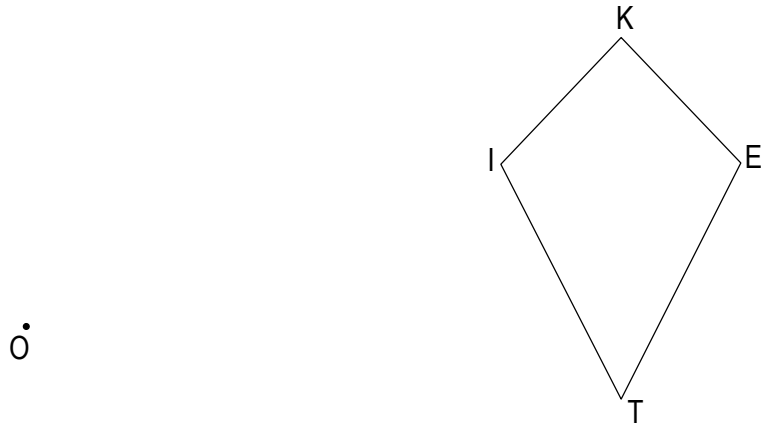


☐ (b) Use the ratio method to make a scale drawing of △HAT using a scale factor $r = \frac{9}{2}$. Label the image H'AT'. (Which point isn't going to move?)



☐ (3) ruler **Using dilation and the ratio method to make scale drawings**

☐ (a) Create a scale drawing (dilation) of the figure below using the ratio method about center O and scale factor r = ½. (notation: $D_{O,½}$)



STEPS:

(1) Draw rays _____, _____, _____, _____

(2) Use a ruler to find the distance OK = _____ and then multiply OK by ____ to get OK' = _____

(3) Repeat step 2 for OI, OT, and OE

(4) Label and connect K'I'T'E'

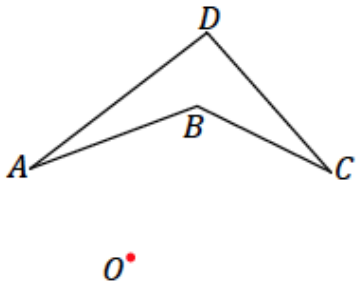
☐ (b) Create a scale drawing (dilation) of the figure below using the ratio method about center O and scale factor r = 3.

(notation: $D_{O,3}$)

STEPS (1) Draw _____

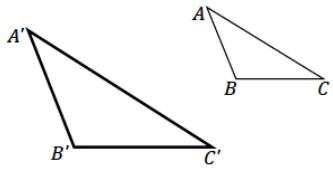
(2) Measure _____ and multiply by _____ to locate _____

(3) Repeat, label, connect



☐ (4) ruler **Locating the center of a dilation**

☐ (c) △A'B'C' is a scale drawing of △ABC drawn by using the ratio method. Use your ruler to determine the location of the center O used for the scale drawing.



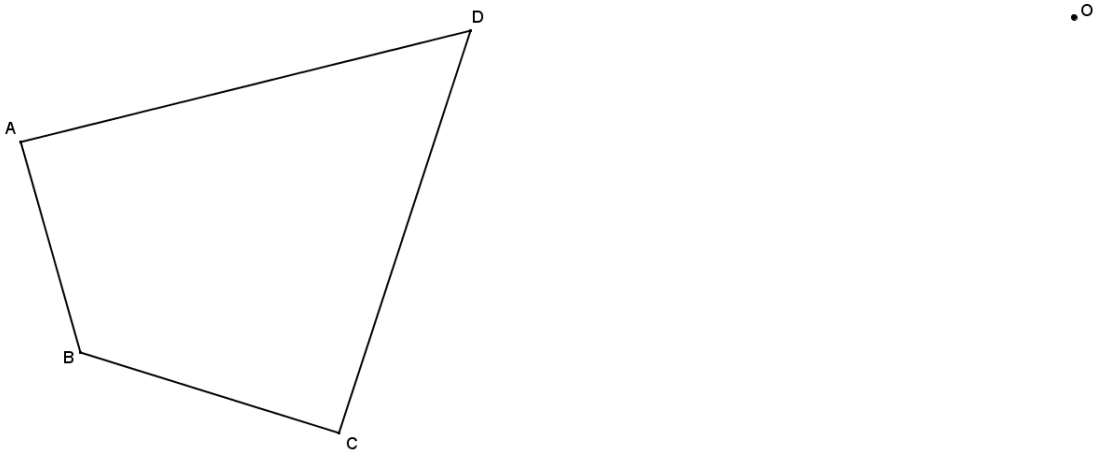
☐ (5) cont compass **BIG IDEA: To make a _____ _____ , I need to multiply the side lengths of a figure by the _____ _____. To draw a _____ I need to (1) draw rays from the _____ ____ _____ through each preimage point, (2) measure the distance from the _____ ____ _____ to each vertex on the preimage, (3) multiply each distance by the _____ _____ and, (4) use the distance from part 3 to locate and mark the image point on the ray that passes through the preimage.**

☐ (6) **Exit Ticket**

ON THE LAST PAGE

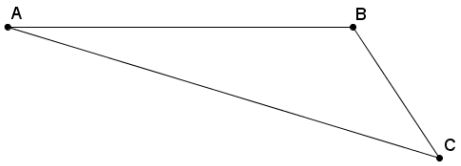
☐ (7) compass, straightedge **Homework: Do at least parts (a), (b), (e), (g), and (h)**

☐ (a) Use the ratio method to create a scale drawing about center O with a scale factor of r = ¼. Use tracing paper to verify that the corresponding angles are equal. (notation: $D_{O,¼}$)

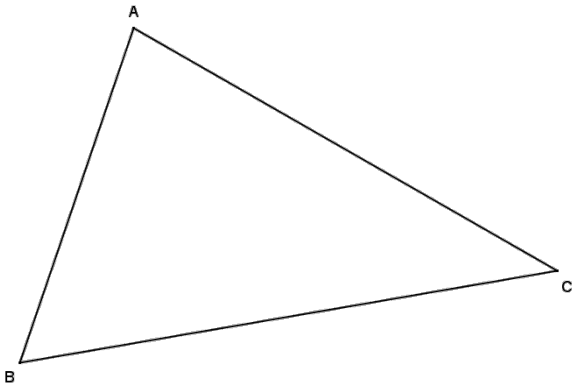


☐ (7) compass, straightedge **Homework**

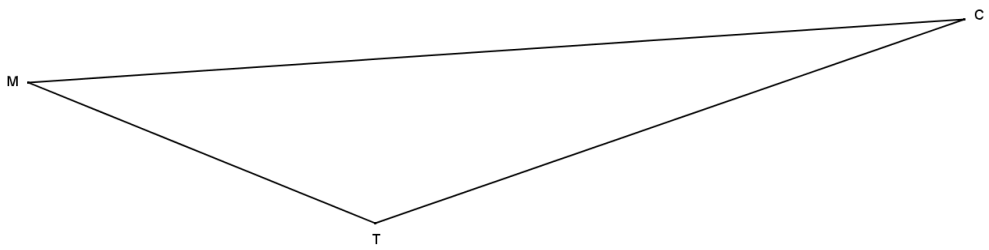
☐ (c) Use construction tools to create a scale drawing of △ABC with a scale factor of r = 3.



☐ (d) Use construction tools to create a scale drawing of △ABC with a scale factor of r = ½.



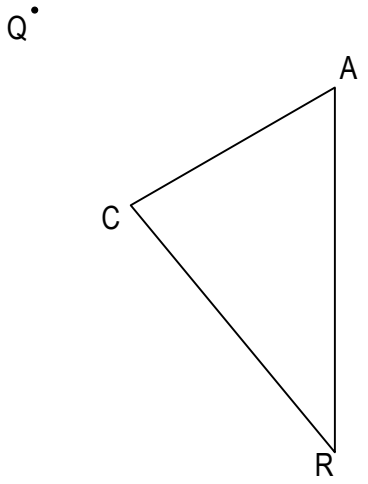
☐ (e) Triangle MTC is provided below. Use construction tools to complete a scale drawing so that the scale factor is ¼.



Exit Ticket Name_____ Date _____ Per_____ 11.2L

(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

(a) Use the ratio method to create a scale drawing about center Q and scale factor r = 2
(b) Summarize the steps for making a scale drawing by the ratio method.



DO NOW Name_____ Date _____ Per_____ 11.2L

(1) A scale drawing is drawn with each of the scale factors below. For each scale factor, state whether the scale drawing will be larger or smaller than the original.

(a) $r = \mathbf{4}$

(b) $r = \frac{\mathbf{1}}{\mathbf{3}}$

(c) $r = \frac{5}{7}$

(d) $r = \frac{\mathbf{8}}{\mathbf{3}}$

(2) What is happening in this series of photos?