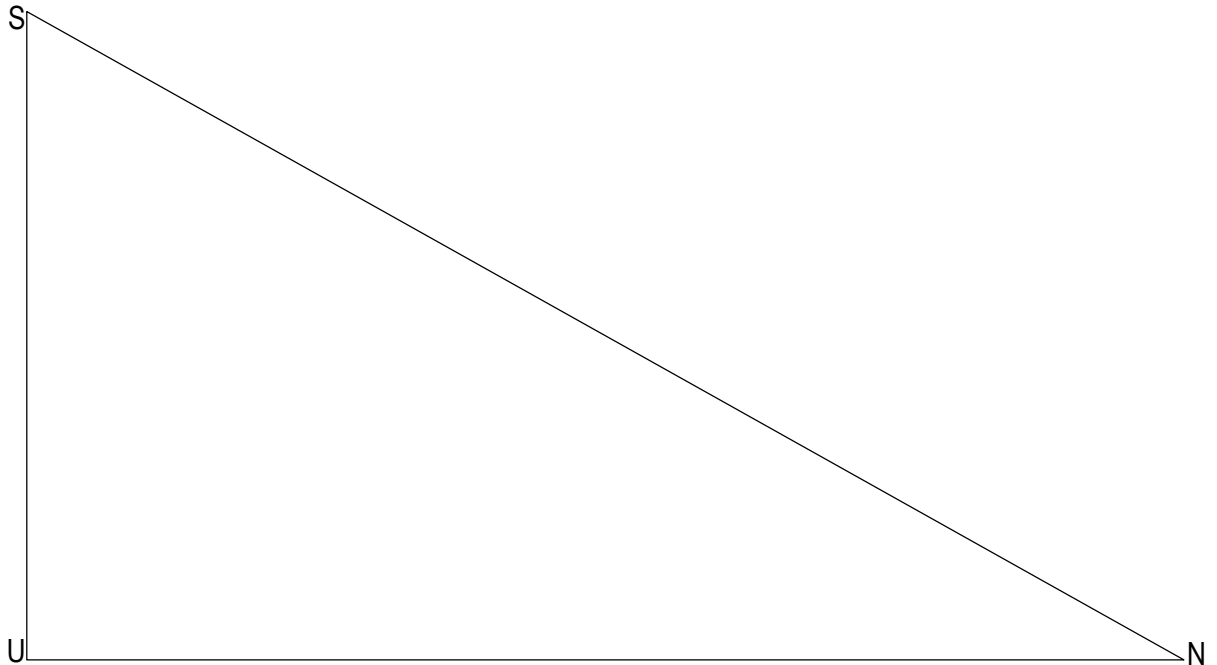


Name _____ Per _____

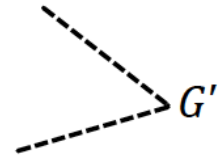
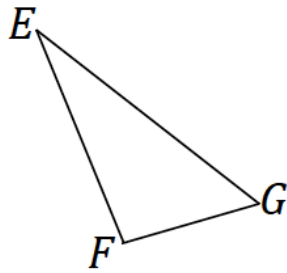
LO: I can make a scale drawing by construction or the ratio method (using dilation).

 DO NOW On the back of this packet (1) **Scale drawing construction**compass,
straightedge (a) Construct a scale drawing of $\triangle SUN$ using a scale factor $r = \frac{1}{4}$.

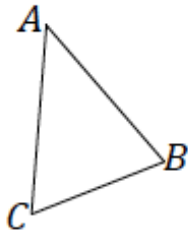
(2) **Constructing scale drawings given an angle or segment of the scaled figure.**

compass,
straightedge

- (a) Triangle EFG is provided below, and one angle of scale drawing $\triangle E'F'G'$ is also provided. Use construction tools to complete the scale drawing so that the scale factor is $r = 3$. What properties do the scale drawing and the original figure share? Explain how you know.

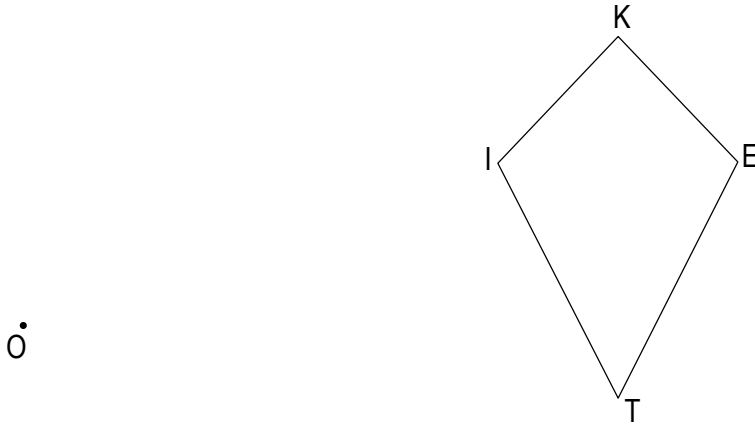


- (b) Triangle ABC is provided below, and one side of scale drawing $\triangle A'B'C'$ is also provided. Use construction tools to complete the scale drawing and determine the scale factor.



(3) 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 $r = \frac{1}{2}$. (notation: $D_{O, \frac{1}{2}}$)



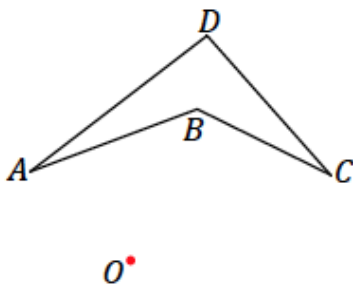
STEPS:

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

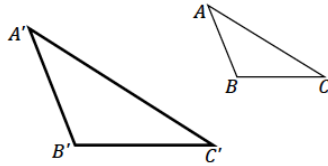
- STEPS (1) Draw _____
 (2) Measure _____ and multiply by _____ to locate _____
 (3) Repeat, label, connect



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

ruler

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



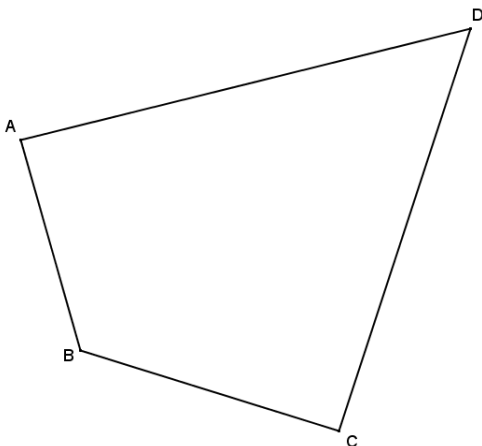
(5) **BIG IDEA:** To make a _____, I need to multiply the side lengths of a figure by the _____. To draw a _____ I need to (1) draw rays from the _____ through each preimage point, (2) measure the distance from the _____ to each vertex on the preimage, (3) multiply each distance by the _____ and, (4) 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) **Homework: Do at least parts (a), (b), (e), (g), and (h)**
compass,
straightedge

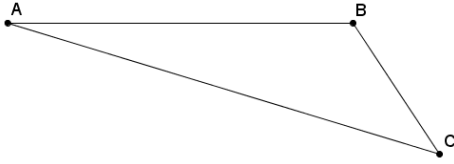
(a) Use the ratio method to create a scale drawing about center O with a scale factor of $r = \frac{1}{4}$. Use tracing paper to verify that the corresponding angles are equal. (notation: $D_{O, \frac{1}{4}}$)

•^o

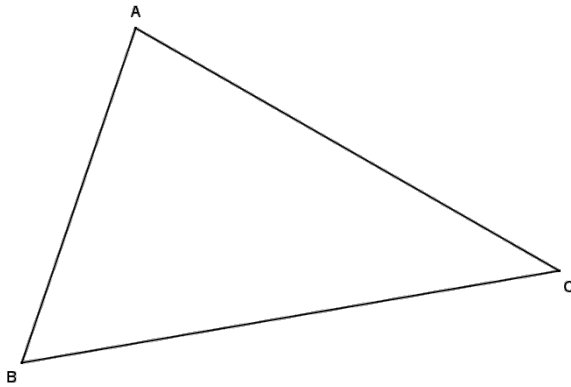
(7) **Homework**

compass,
straightedge

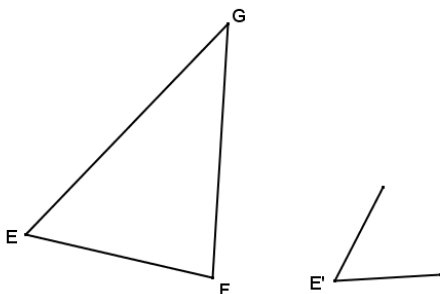
(c) Use construction tools to create a scale drawing of $\triangle ABC$ with a scale factor of $r = 3$.



(d) Use construction tools to create a scale drawing of $\triangle ABC$ with a scale factor of $r = \frac{1}{2}$.

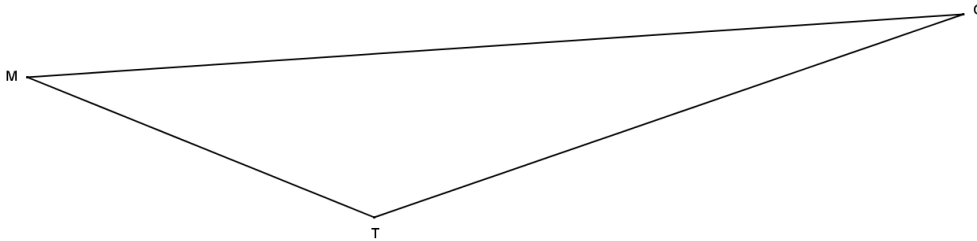


(e) $\triangle EFG$ is provided below, and one angle of scale drawing $\triangle E'F'G'$ is also provided. Use construction tools to complete a scale drawing so that the scale factor is $r = 2$.

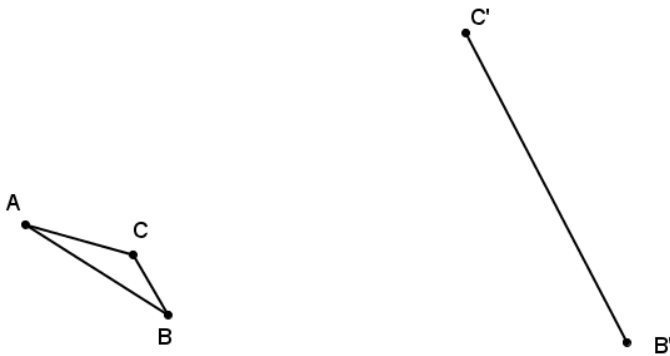


(7) **Homework**
cont.

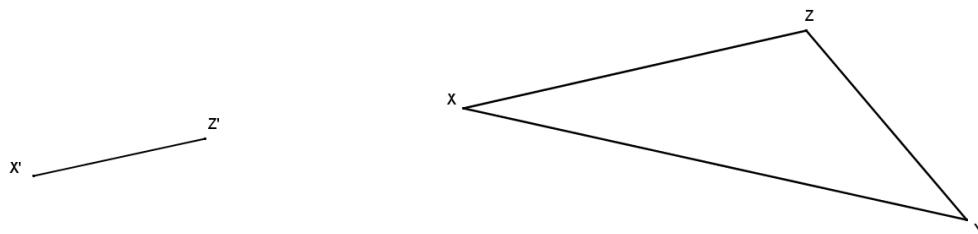
- (f) Triangle MTC is provided below. Use construction tools to complete a scale drawing so that the scale factor is $\frac{1}{4}$.



- (g) Triangle ABC is provided below, and one side of scale drawing triangle A'B'C' also provided. Use construction tools to complete the scale drawing and determine the scale factor.



- (h) Triangle XYZ is provided below, and one side of scale drawing triangle X'Y'Z' is also provided. Use construction tools to complete the scale drawing and determine the scale factor.

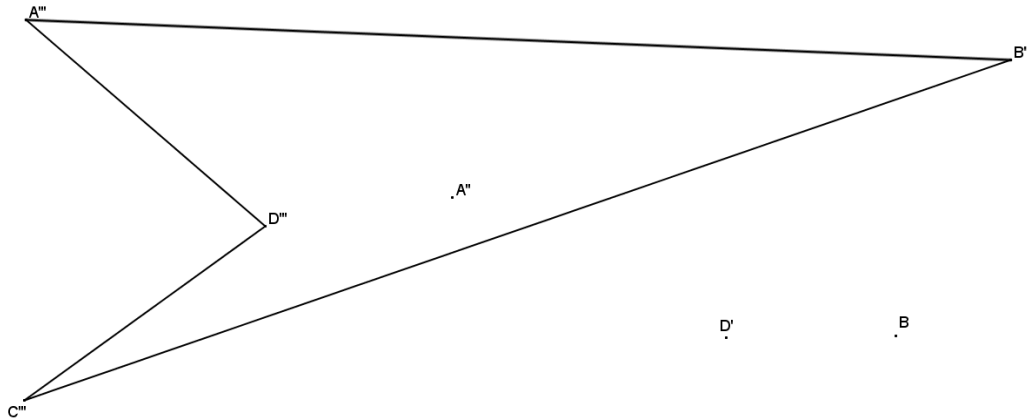


(7) Homework
cont.

(i) Quadrilateral $GHIJ$ is a scale drawing of quadrilateral $ABCD$ with scale factor r . Describe each of the following statements as always true, sometimes true, or never true, and justify your answer.

- a. $AB=GH$
- b. $m\angle ABC=m\angle GHI$
- c. $ABGH=BCHI$
- d. $\text{Perimeter}GHIJ=r\cdot\text{Perimeter}(ABCD)$
- e. $\text{Area}GHIJ=r\cdot\text{Area}ABCD$ where $r\neq 1$
- f. $r<0$

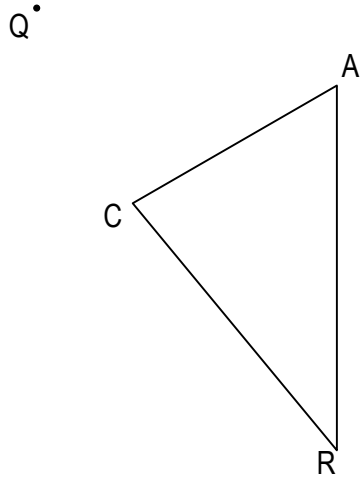
(j) Quadrilateral $A''B''C''D''$ is one of a sequence of three scale drawings of quadrilateral $ABCD$ that were all constructed using the ratio method from center O . Find the center O , each scale drawing in the sequence, and the scale factor for each scale drawing. The other scale drawings are quadrilaterals $A'B'C'D'$ and $A''B''C''D''$.



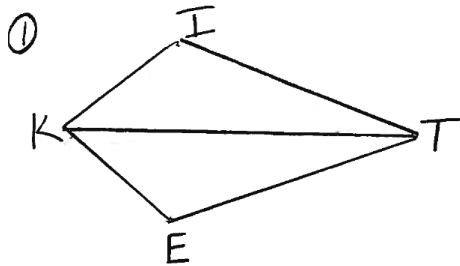
Exit Ticket Name _____ Date _____ Per _____ 5.2R

(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:

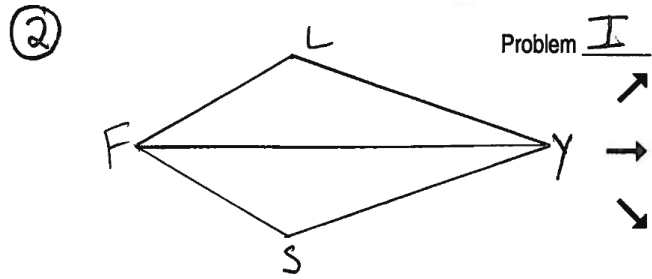
- Use the ratio method to create a scale drawing about center Q and scale factor $r = 2$
- Summarize the steps for making a scale drawing by the ratio method.



(1) PROOF PROGRESS I: Write a proof for #1 or #2. Attach this to the top of your "Proof Progress" packet.



Given: \overline{KT} bisects $\angle IKE$
 $\overline{KI} \cong \overline{KE}$
 Prove: \overline{KT} bisects $\angle ITE$



Given: \overline{FY} bisects $\angle LFS$
 \overline{FY} bisects $\angle LYS$
 Prove: $\triangle FLY \cong \triangle \underline{\hspace{1cm}}$
 You have to name it in the correct order

(2) Draw \overline{OR} below. Use your compass and straightedge to make a segment half the length of \overline{OR} . (Hint: the segment you make can be part of the original segment OR.)

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

