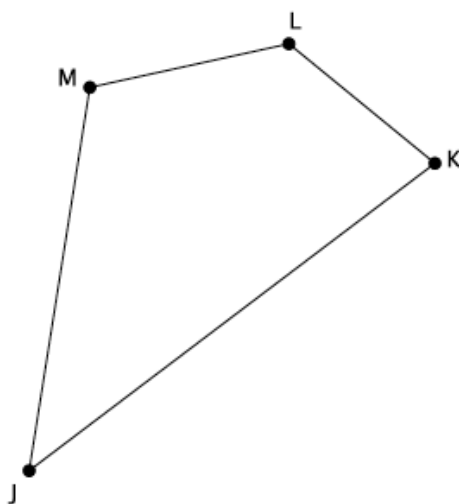


Lesson Summary

Dilations map lines to lines, rays to rays, and segments to segments. Dilations map angles to angles of the same degree.

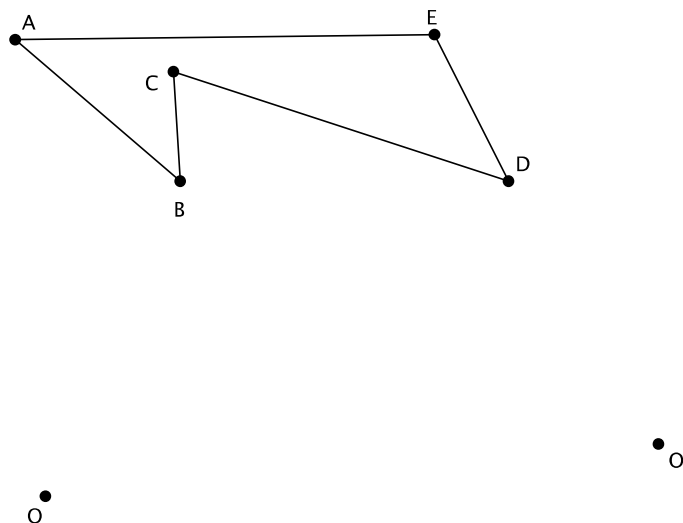
Problem Set

1. Use a ruler to dilate the following figure from center O , with scale factor $r = \frac{1}{2}$.



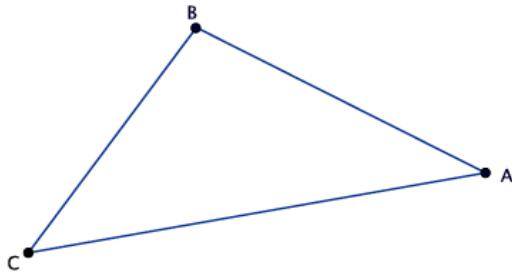
• O

2. Use a compass to dilate the figure $ABCDE$ from center O , with scale factor $r = 2$.



- a. Dilate the same figure, $ABCDE$, from a new center, O' , with scale factor $r = 2$. Use double primes ($A''B''C''D''E''$) to distinguish this image from the original.
- b. What rigid motion, or sequence of rigid motions, would map $A''B''C''D''E''$ to $A'B'C'D'E'$?

3. Given center O and triangle ABC , dilate the figure from center O by a scale factor of $r = \frac{1}{4}$. Label the dilated triangle $A'B'C'$.



• O

4. A line segment AB undergoes a dilation. Based on today's lesson, what is the image of the segment?
5. $\angle GHI$ measures 78° . After a dilation, what is the measure of $\angle G'H'I'$? How do you know?