Copy the boldface line into a new Word document. DAL 2016-04-18

Insert your data and save as "YOUR NAME Dilations on Geogebra" to your own folder or Drive.

Dilations On Geogebra **Name:** **Date:** **Hour:**

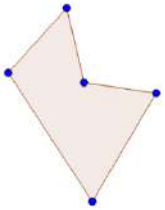
READ. THE. DIRECTIONS.

1) Use your internet browser to open the geogebra.org site.

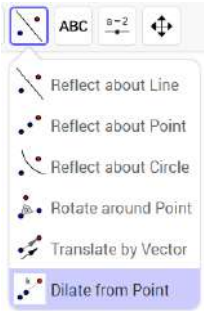
2) Sign in to Geogebra using one of the options provided.

3) Click Start Geogebra > Geometry

4) Use the polygon tool to draw a polygon with 4 to 8 sides. Do not draw a regular polygon.



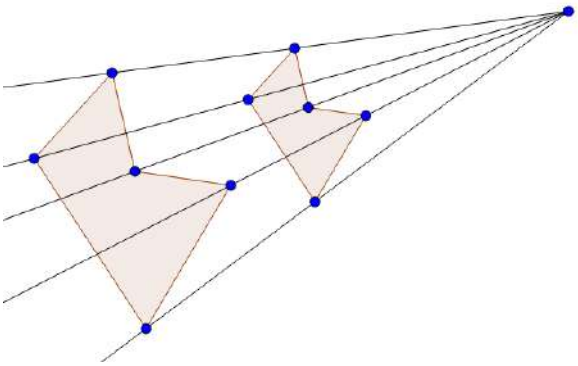
5) Create a new point, far outside the polygon. This point will be used as your center of dilation.



6) Select Dilate from Point from the Transformations menu. Follow the instructions in the black box at the bottom of the screen. Select a dilation factor which is between 0 and 1.

7) If the image and preimage overlap a lot, use the move arrow to move the center of dilation, or move points on the preimage.

8) Create rays from the center of dilation through every point on the preimage. Note that they should also pass through corresponding points on the image.



9) Drag the center of dilation to see what happens.

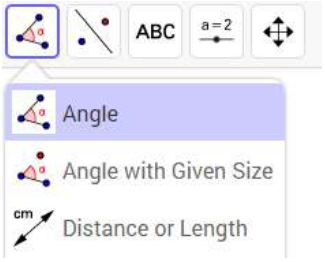
10) The snipping tool is found in All Programs>Accessories, from the  Windows Start button. It can be right-dragged down to the bottom taskbar. Use the snipping tool  to copy and paste the figure you created into your word document. You may need to:

    a) right click and crop out extra white space

    b) shrink the image to fit on the page

    c) left click on image, and select "Tight"  wrapping so words will fit around the image

11) Undo  (delete) all the rays you created.



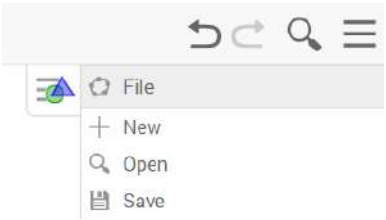
12) Use the measure tools to measure <u>at least</u> two sides and two <u>interior</u> angles on the preimage. Measure the corresponding sides and angles on the image.

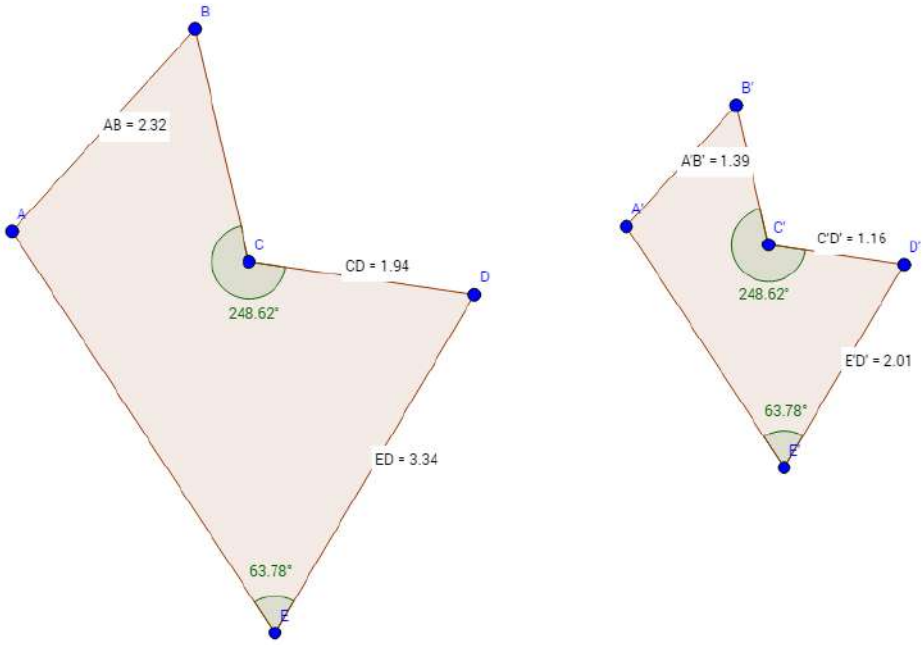
13) Move the labels so they do not overlap the points or other labels. To get labels to appear, right click on an object, and select Show Label.

14) Use the snipping tool again to copy your diagram, with measurements, as shown to the right.

15) Save your geogebra work, using a logical name.

e.g., "NAME Dilations Geometry April 18 2016"





16) Write a paragraph or two describing the dilation factor and how it relates to the figures. Be sure to explain:

a) what the center of dilation is

b) what the scale factor is

c) how the scale factor numerically relates to the segment lengths

d) what stayed the same

e) Extra Credit: show that the angles add up to the proper number based on the interior angle formula

17) Print your document. Be sure to preview it to make sure it fits on the page, without a lot of wasted extra space. And, (duh) make sure you followed the directions at the beginning, and typed your name.