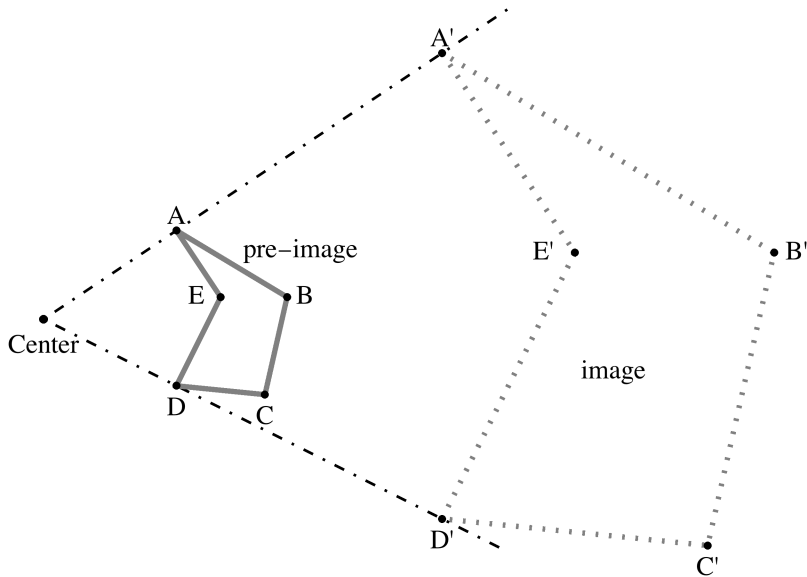


7. Introduction to Dilation

First & Last Name: _____ Class: _____



A dilation is illustrated above. It has a *center*, a *pre-image*, a *scaling factor*, an *image*, and *projection lines*. In this example, the scaling factor is 3.

Task 1

For each vertex in the pre-image and the image, measure the distance (in millimeters) from the center to the vertex. Summarize your results in this table:

Vertex	Pre-image	Image
A		
B		
C		
D		
E		

What pattern do you see?

Task 2

For each side in the pre-image and the image, measure its length (in millimeters) . Summarize your results in this table:

Side	Pre-image	Image
\overline{AB}		
\overline{BC}		
\overline{CD}		
\overline{DE}		
\overline{EA}		

What pattern do you see?

Task 3

Based on your answers in Task 2, what can you conclude about the relationship between the pre-image and image when an pre-image is dilated?

Task 4 (Challenge)

Prove that a dilation of any shape results in your conclusion from Task 3.