EXPLORING TRANSFORMATIONS

Go to www.geogebra.org/m/ecyvtdfg to complete the GeoGebra activity.

Part A: $k > 1$

Enter a k-value that is greater than 1. Move *point Z* and complete the table below.

Location of *point Z* *(relative to preimage)*	Location of Image *(relative to preimage)*	What do you think *point Z* does?
Left		
Right		
Above		
Below		

Part A: $0 < k < 1$

Enter a k-value that is between 0 and 1. Move *point Z* and complete the table below.

Location of *point Z* *(relative to preimage)*	Location of Image *(relative to preimage)*	What do you think *point Z* does?
Left		
Right		
Above		
Below		

What happened when *point Z* was close to the preimage compared to when *point Z* was further from the preimage?

What does k seem to do?

Part B:

Now follow the directions for the Part B GeoGebra applet. Did this change or confirm your thoughts about *point Z* or k? How so?

Part C

Use the GeoGebra applet to draw a line through each corresponding pairs of vertices (one line per pair). What do you notice?

Now complete the table below.

Length	Length	Ratio of Lengths
$AB =$	$A'B' =$	$\frac{A'B'}{AB} =$
$BC =$	$B'C' =$	$\frac{B'C'}{BC} =$
$CA =$	$C'A' =$	$\frac{C'A'}{CA} =$

Part D

Complete the table below.

Length	Length	Ratio of Lengths
$ZA =$	$ZA' =$	$\frac{ZA'}{ZA} =$
$ZB =$	$ZB' =$	$\frac{ZB'}{ZB} =$
$ZC =$	$ZC' =$	$\frac{ZC'}{ZC} =$

What do you notice?