Go to [www.geogebra.org/m/ecyvtdfg](http://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 |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

# Part D

Complete the table below.

| Length | Length | Ratio of Lengths |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

What do you notice?