**Lesson 1: Dilations**

***II. Dilations***

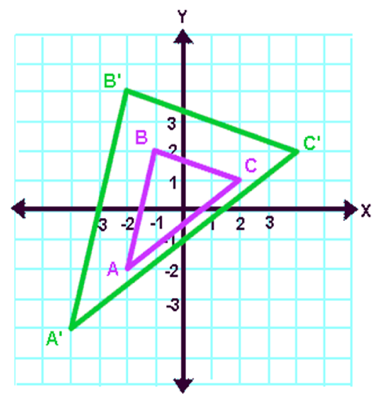
A**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

is a transformation which changes the size of a figure but not its shape. This reduces or enlarges the figure to a similar figure.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is the original figure before a transformation is applied.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is the resulting figure after the dilation.

Write an ordered pair for each coordinate, and then write the transformation from the pre-image to the image

1. 

Pre-Image: \_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_

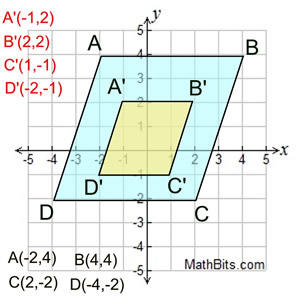
Image: \_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_

Transformation:

\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Pre-Image:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

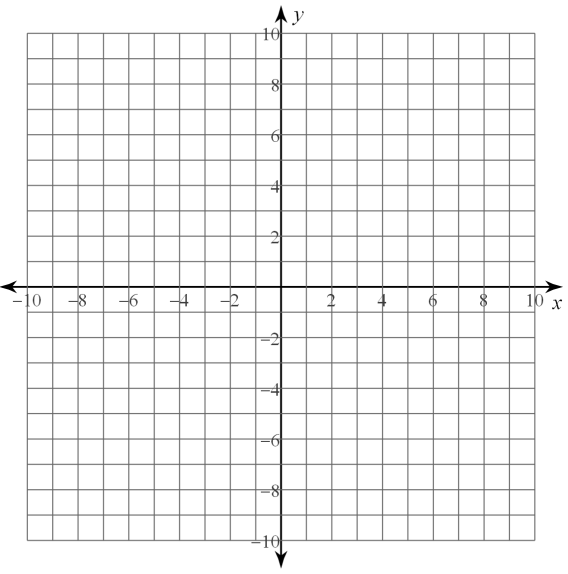
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Image:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Transformation:

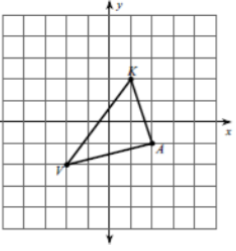
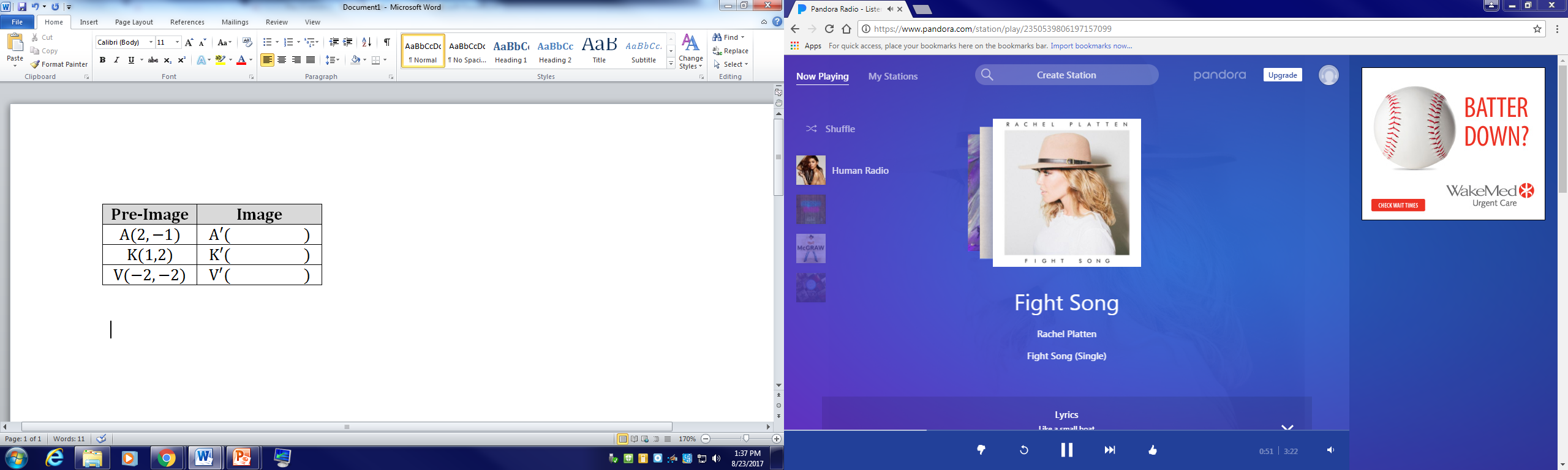
1. Graph and connect the points and

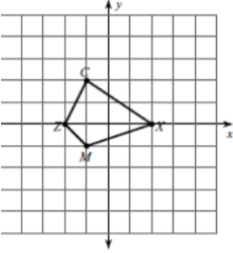
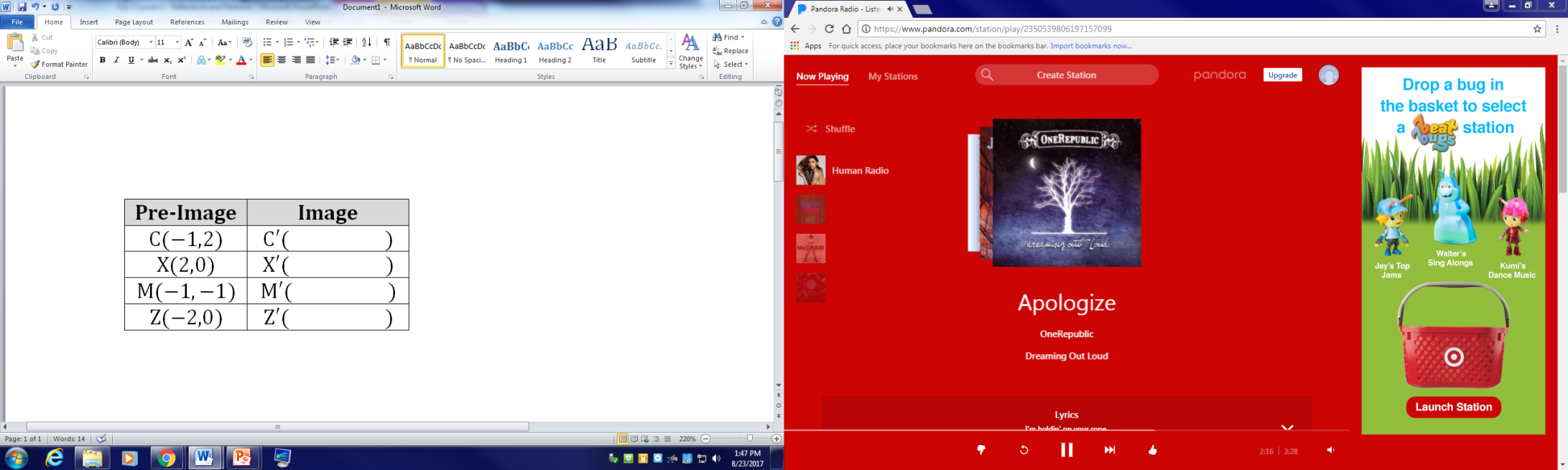
Graph a new figure on the same coordinate plane with a scale factor of 2.

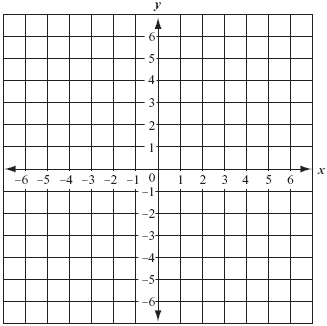
1. Graph a new figure on the same plane with a scale factor of ½. Compare all 3 of the figures. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What happens when you apply a scale factor of greater than 1? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What happens when you apply a scale factor of less than 1? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Find the coordinates of each transformation and graph the image

1. Dilation of 1.5
2. Dilation of 2



1. Write a rule to describe the transformation. S(1, 4), X(0, 5), F(5, 4), E(1, 2) to E’(0.5, 1), X’(0, 2.5), S’(0.5, 2), F’(2.5, 2)