Discovering Similarity :

Objectives:

* Students will understand similarity is a transformation.
* Students will understand scale factor and its relationship to the size of the image.
* Students will be able to articulate the definition of similarity and write similarity statements.
* Students will be able to calculate the scale factor of a given image and preimage using coordinates of vertices or proportions.
* Students will be able to determine the length of corresponding sides using the scale factor.

Lesson:

Warm-Up: Similarity Warm-Up handout

Lesson Opener:

Have several students use the paddle figure and a flashlight to create a shadow of the figure on the wall.

Ask the following questions:

* How does the size of the shadow figure compare to the original?
* How does the shape of the shadow figure compare to the original?
* Do you think the shadow is a transformation of the original? Why or why not?

Yes. The shadow is a transformation because the points that make up the outline of

the object are mapped to form the outline of the shadow puppet.

Task:

Have students work in pairs to complete the questions on the first 2 pages of the Discovering Similarity handout.

As a class, discuss the results and conclusions from this page. Discuss the vocabulary on page 2. Make sure the students have a solid understanding of the vocabulary.

Have the students work in their partnerships to complete the questions on page 3.

Wrap up by making sure students understand how to write a similarity statement, can find a scale factor, and can draw an image from a preimage with a given scale factor.