

## Similar Figures

### Discovery Activity – ID: 9631

Name \_\_\_\_\_

Class \_\_\_\_\_

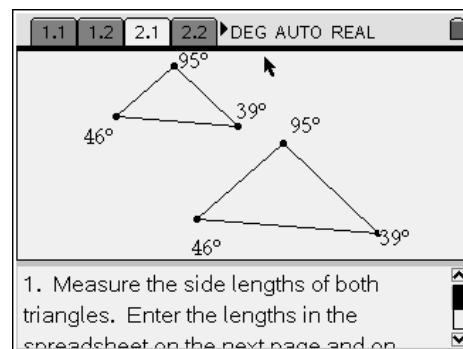
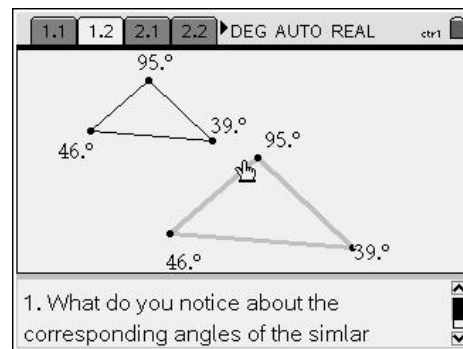
In this activity, you will explore:

- similar triangles
- discover properties of similar triangles.

Open the file *GeoAct\_SimFigDiscAct\_EN.tns* on your handheld and follow along with your teacher to work through the activity. Use this document as a reference and to record your answers.

#### Problem 1 – Angles of similar triangles

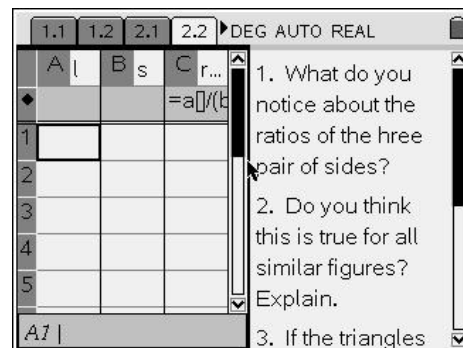
1. What do you notice about the corresponding angles of the similar triangles?
2. Grab a vertex of the small triangle. What happens?
3. Do you think this is true of all similar figures? Explain your reasoning.



#### Problem 2 – Measure the side lengths

1. Measure the side lengths of both triangles.
- Enter the lengths in the spreadsheet on page 2.2 of the calculator and on your paper.

Large Triangle	Corresponding Sides of Small Triangle	Ratio of Corresponding Sides (Large to Small)



1. What do you notice about the ratios of the three pair of sides?
2. Do you think this is true for all similar figures? Explain.
3. If the triangles had been made with a scale factor 2 instead, how would the sides of the two triangles be related? With a scale factor of 0.5?

## Problem 3 – Perimeters of similar triangles

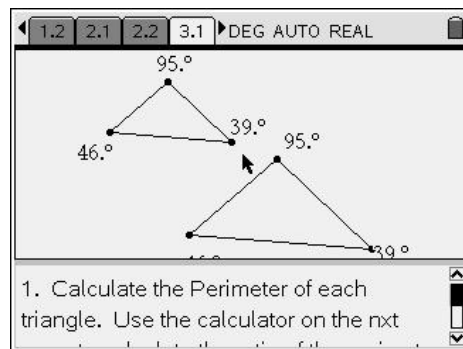
Calculate the perimeter of each triangle.

Use the calculator on 3.2 to calculate the ratio of the perimeter of the large triangle to the small triangle.

Large Triangle = \_\_\_\_\_

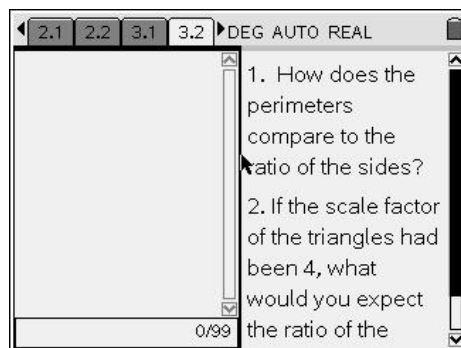
Small Triangle = \_\_\_\_\_

Ratio of Large to Small perimeter = \_\_\_\_\_



1. How does the ratio of the perimeters compare to the ratio of the sides?

2. If the scale factor of the triangles had been 3, what would you expect the ratio of the perimeters to be?



## Problem 4 – Compare similar triangles to congruent triangles

How do similar triangles compare to congruent triangles? What do they have in common and what is different?

