

## Stretching and Shrinking Unit Test Study Guide

You should be familiar with the following vocabulary:

- image - original - corresponding angles - corresponding sides - scale factor
- You know how to find the scale factor from one similar figure to another.
- You know that a scale factor larger than 1 *enlarges*, and a scale factor less than 1 *reduces*.
- If you know the scale factor that enlarges from a smaller original to a larger image, you can find the scale factor that reduces from the larger original to the smaller image.
- You know how to write a rule as an *ordered pair* to transform a figure on a coordinate grid (for example, the rule  $(3x, 3y)$  enlarges a figure three times).
- You know how to write a rule that creates a similar or non-similar figure.
- You know how to write a rule that moves a figure, but doesn't enlarge or reduce it
- If you know the scale factor from one figure to another, and you know the perimeter of a figure, you can find the perimeter of the other figure.
- If you know the scale factor from one figure to another, and you know the area of a figure, you can find the area of the other figure.
- You know how to find a missing side length on similar polygons using scale factors
- You can use side ratios to find out missing side lengths if the numbers are appropriate.
- You can find the heights of objects using the shadow method or mirrors.
- You can figure out the distance across something using similar triangles.

### Hints

**"The scale factor can't hide, divide the image by the corresponding side"**

**"To find the image area, multiply by the scale factor squared"**

### **Things to do to study for the test**

- Complete the practice test and check the answers with the answer key.
- Discuss the concepts listed above and on the earlier study guides with your parents or guardians, friends, fellow students.
- Try to come up with (and write down) an example for each of the concepts listed above and on earlier study guides.
- Go over the earlier quiz and redo any problems you got wrong. Check your answers with someone.
- Go over the work we did in class. Redo any problems you don't understand. Check your answers with someone.
- Go over all your homeworks and look carefully at your corrections. Redo any problems you didn't understand.
- Read the Unit Review on page 98. Do the problems on page 98 and 99 with a friend.
- Discuss the questions on page 100 with a friend, parent, teacher, etc.
- Do the following ACE problems:
  - pg 70 # 26
  - pg 71 # 27
  - pg 88 # 27, 28, 29, 30, 31
  - pg 89 # 29, 30, 31
  - pg 90 # 35, 36, 37

### **Things to do to study for the test**

- Have your materials ready the night before, including your calculator and a few pre-sharpened pencils with erasers.
- Get a good nights sleep.
- Eat a good, healthy breakfast.