**Notes on Similar Figures**:

**SOL G.14**

**Definition of Similar Solids**:

Two solids of the same type with **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of corresponding linear measures (such as heights or radii) are called similar solids.

To compare the ratios of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** side or other linear lengths, write the ratios as **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** in **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

What are the variables for a rectangular prism on your formula sheet?

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

**Are these shapes similar? Let’s find out!**

Compare the lengths as a fraction:\_\_\_\_\_\_\_\_\_\_\_\_\_

Compare the widths as a fraction:\_\_\_\_\_\_\_\_\_\_\_\_\_

Compare the heights as a fraction:\_\_\_\_\_\_\_\_\_\_\_\_

Are they all the same fraction?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Are the shapes similar?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are the variables in the cone formula on your formula sheet?

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

**Are these solids similar? Let’s Find out!**



Compare the radii as a fraction:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Compare the heights as a fraction:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Are they the same fraction? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Are the shapes similar?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Similar Solids and Ratios of Areas:**

If two similar solids have a scale factor of \_\_\_\_\_\_\_\_\_\_\_\_\_, then corresponding **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**have a ratio of **\_\_\_\_\_\_\_\_\_\_\_\_\_.**

This applies to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



What is the ratio of the sides?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the surface area of figure 1?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the surface area of figure 2?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the ratio of the surface areas?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What do you notice?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Similar Solids and Ratios of Volumes**

If two similar solids have a scale factor of \_\_\_\_\_\_\_\_\_\_\_\_\_\_, then their **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** have a ratio of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.



What is the ratio of the heights?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the ratio of the radii?

What is the Volume of figure 1?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the Volume of figure 2?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the ratio of the volumes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What do you notice?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_