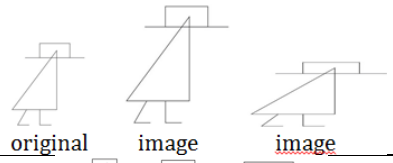
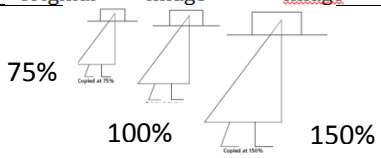
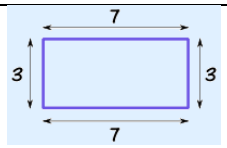
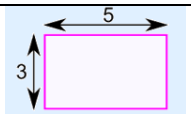
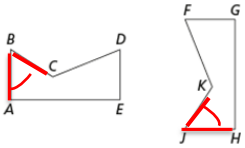
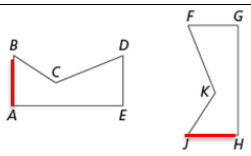
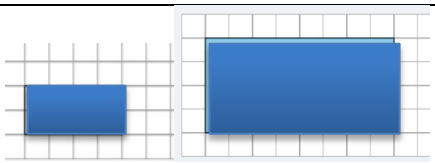
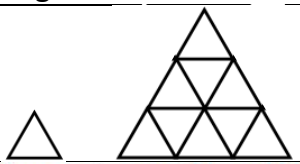
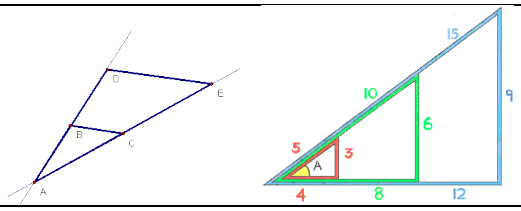
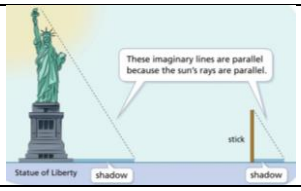
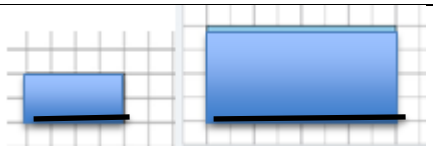
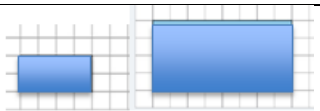
CC 7 Stretching and Shrinking Tool Kit

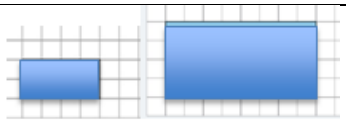
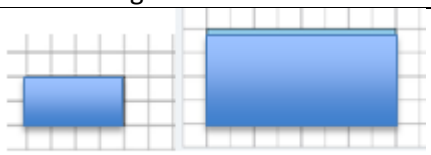
Name: _____KEY_____

Word	Definition	Example
similar figures	Similar figures have the same shape but may have different sizes.	
image	The figure that results from some transformation of a figure.	
copy factor (%)	The percent (%) of the enlargement or the reduction from the original design.	
perimeter	Perimeter is the distance around a two-dimensional shape.	 **3 + 7 + 3 + 7 = 20 ut**
area	Area is the size of a surface. Area = **w x h**	 **3 x 5 = 15 ut²**
corresponding angle	Corresponding angles have the same relative position in similar figures.	
corresponding lengths /corresponding sides	Corresponding sides have the same relative position in similar figures. In the similar shapes shown, side *AB* corresponds to side *HJ*.	
scale factor	The number used to multiply the lengths of a figure to stretch or shrink it to a similar image.	 Scale factor of 2
If the scale factor is **greater than 1**, the side lengths of the **image** are **greater than the original** figure. If the scale factor is **less than 1**, the side lengths of the **image** are **less than the original** figure. If the scale factor is **equal to 1**, then the two figures are **congruent.**		
rep-tile	A figure you can use to make a larger, similar version of the original.	
scale drawing (also known as scale model)	An image of a figure that is similar to the original.	A map is a scale model. 

nested triangle	Triangles that share a common angle.	
ratio	A comparison of two quantities: the ratio of 3 to 5 means '3 for every 5.'	3/5 3 to 5 3 : 5
equivalent ratios	Ratios whose fraction representations are equivalent are called equivalent ratios.	3 to 4 and 6 to 8 are equivalent $3/4 = 6/8$
adjacent side lengths	Two sides that meet at a vertex. In this rectangle, sides *AB* and *AD* are adjacent because they meet at vertex *A*.	
proportion	An equation stating that two ratios are equal.	$\frac{10}{8} = \frac{5}{4}$ $\frac{8}{10} = \frac{4}{5}$
shadow problem	Shadows estimate heights of things that are difficult to measure	

Key Skills From This Unit

Skill	Example	Strategies
Calculating **Scale Factor** between similar figures	Divide the side length of one figure by the other. The answer is the Scale Factor. **Scale Factor is always represented by a multiple.**	 **8÷4 = 2** **(4 x _2_ = 8)** **SF = 2**
Calculating **Perimeter** between similar figures	The Scale Factor times the PERIMETER of the original. **SF x P**	 Scale factor of 2 The perimeter of the larger is twice the perimeter of the smaller. **(2 x 12 = 24 ut)**

Calculating **Angles** between similar figures	Angles of all similar figures are congruent, no matter what the scale factor is. **The Same!**	 Scale factor of 2 All angles in each are 90°
Calculating **Area** between similar figures	The Square of the Scale Factor times the AREA of the original. **SF^2 x A**	 Scale factor of 2 The area is 2^2 (4 times) the area of the original because four of the smaller triangles fit into the larger triangle. **(2^2 x 8 = 32ut^2)**
Find **missing values with scale factor** in similar figures		
Setting up a proportion		
Finding **ratios of side lengths** to find missing values		