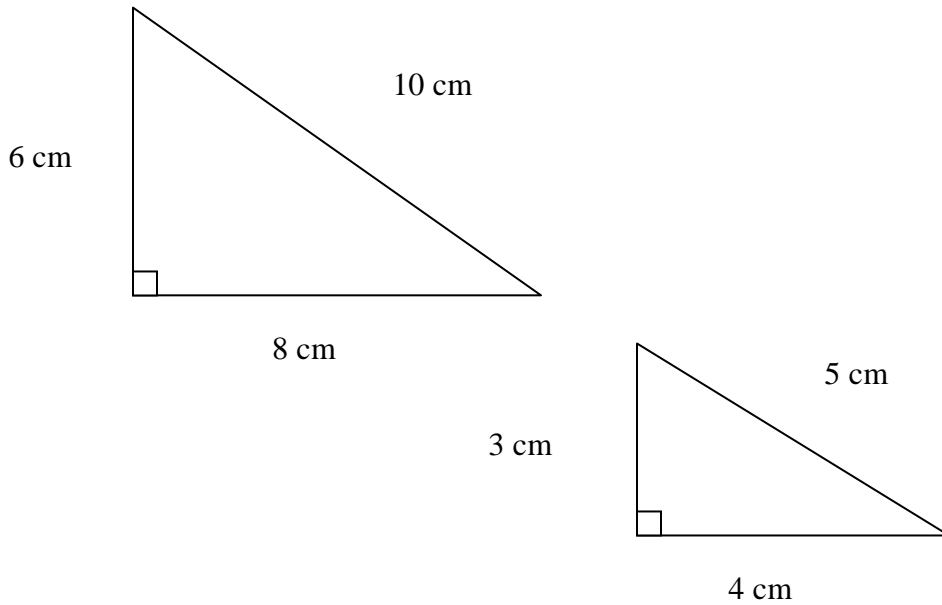
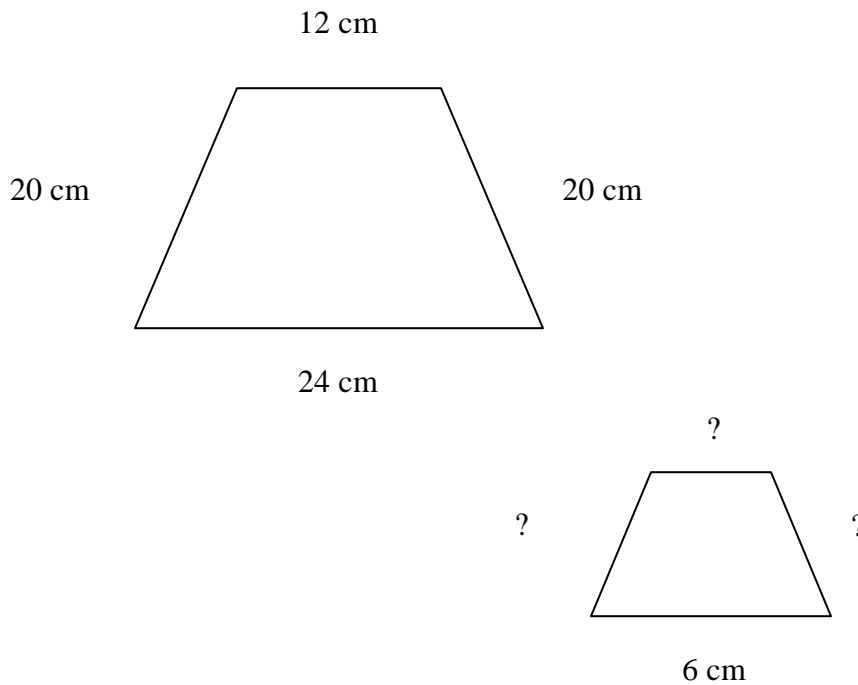


Similarity and Dilation: Two polygons are similar if they are exactly the same shape, but different sizes. A dilation of a polygon is shrinking or stretching an image by the same amount. Similarity and Dilation are both examples of using ratios.

Similarity: The two triangles below are considered similar because their sides are all equal ratios. (the larger triangles sides are all exactly twice as long)



TASK #1: Use the concept of equal ratios to find the missing lengths on the smaller trapezoid..



TASK #2: Using a ruler, measure the length and width of the rectangle provided. You may use inches or centimeters. Once you know the measurements of this rectangle, draw a rectangle that is similar to it (larger or smaller).



Dilation: Dilating an object means shrinking it (making it smaller) or stretching it (making it larger). To stretch an object would mean multiplying the coordinates by a number larger than 1. To shrink an object would mean multiplying each coordinate by a number less than 1. The number that you multiply by is called the scale factor.

TASK #3: Print a piece of graph paper. Create the following triangle by plotting and connecting these three coordinates:

(3,1) (6,4) (1,5)

Once your triangle has been graphed, you are going to dilate the triangle by multiplying each coordinate by 3. The new coordinates are (9,3) (18, 12) (3,15). Due to the scale factor being larger than 1, this dilation is a stretch.

