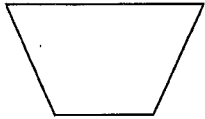
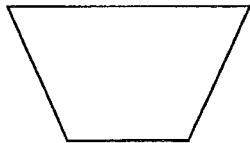


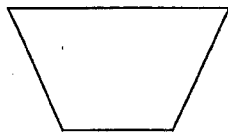
To draw a scale diagram of a polygon, follow these steps.



1. Measure the length of each side in centimeters, to 1 decimal place, if necessary. Then record.

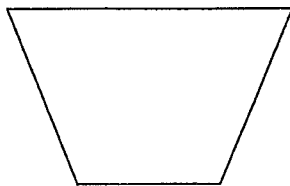


2. Measure each angle and record



3. To sketch a shape using a scale of 1.5

- a) Multiply each side length by 1.5
- b) Sketch each 'new' side using the SAME angles from the 'original'

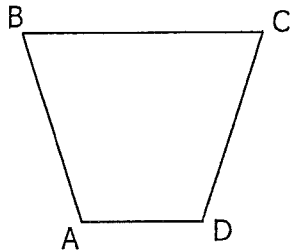


4. To draw with a scale of 0.5, MULTIPLY each side by 0.5

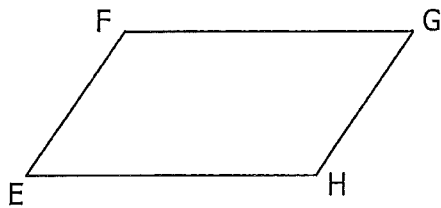
For each of the following polygons:

- Measure all sides to the nearest tenth of a centimeter, and record
- Measure all angles, and record
- Use the Scale Factor, as a decimal, to determine the lengths of the sides on the enlargement and the reduction. **SHOW THE CALCULATIONS AND RESULTS CLEARLY**
- Use this information to sketch each enlargement and reduction

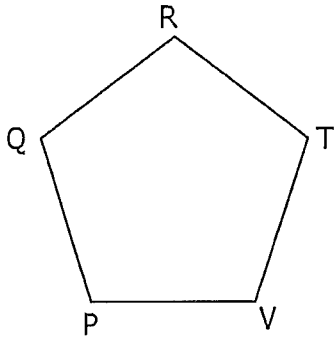
1. Given ABCD: Sketch an enlargement of 150% and then a reduction of 50%. Label all angles and sides.



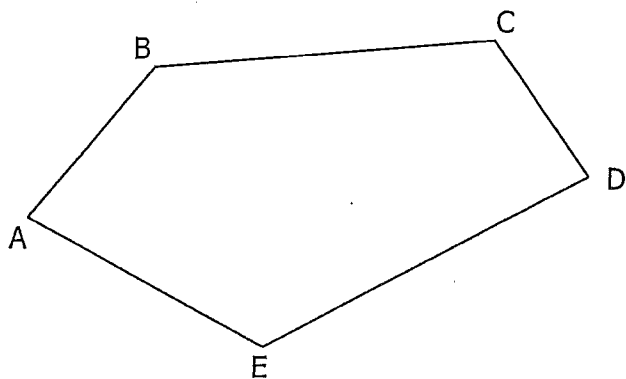
2. Given EFGH, sketch and enlargement of 125% and then a reduction of 75%. SAME INSTRUCTIONS AS Q#1



3. For the shape below: Sketch an enlargement of 200% and then a reduction of 50%.



4. For the shape below: Sketch and label an enlargement of 150 % and then a reduction of 50%.



On the graph paper provided, sketch an enlargement of 150% and a reduction of 50%.

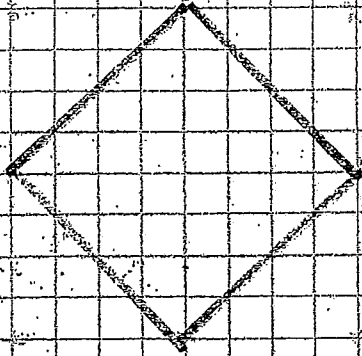
Instructions:

- Sketch, in pencil, a rectangle around the given shape.
- Count and record the length and width of the rectangle, using the grid lines as the measurement.
- Calculate the dimensions of the enlargement and reduction. SHOW YOUR WORK.
- Sketch the enlarged and reduced rectangles, then sketch the shapes "inside"

# Ma 9 3.4 Drawing a Similar Polygon

Free Plain Graph Paper from <http://www.comptech.com/graphpaper.htm>

EXAMPLE:



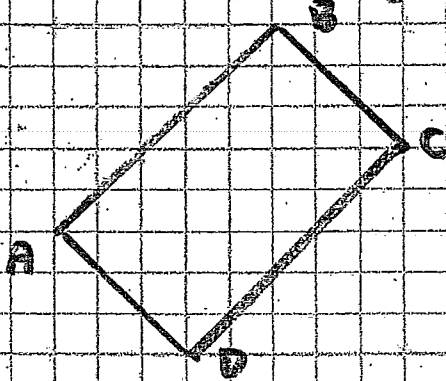
Enlarge by 150%

Reduce by 50%

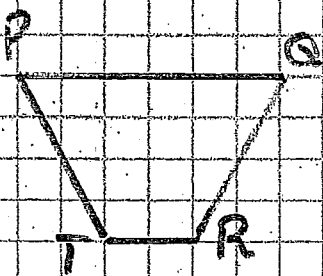
### 3.4 Drawing a Similar Polygon

\* For each, sketch and label an  
• enlargement of 150%    • reduction  
of 50%

1)

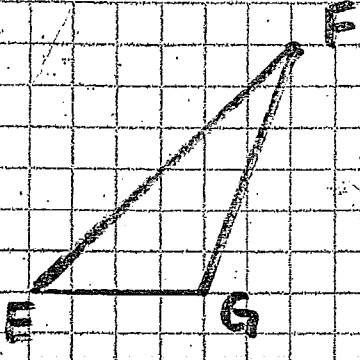


2)

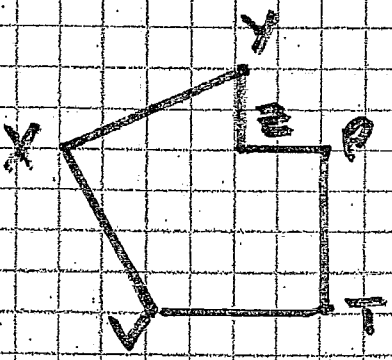




3)



4)



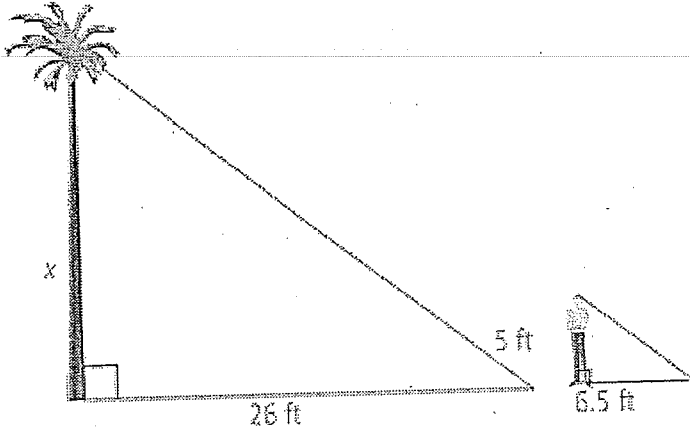
Math 9

3.5—notes

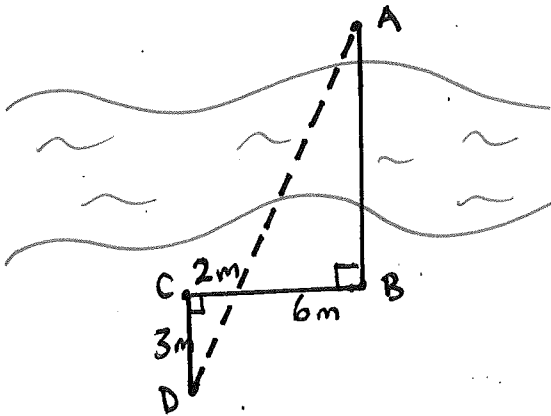
Goal: Use properties of similar triangles to solve problems

The sun creates shadows on the tree and the person below. The objects and shadows create a pair of SIMILAR TRIANGLES

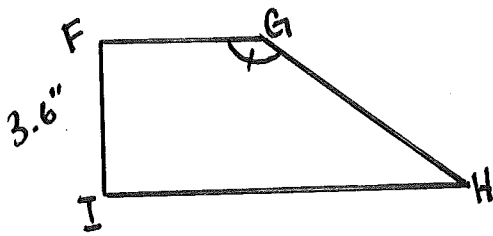
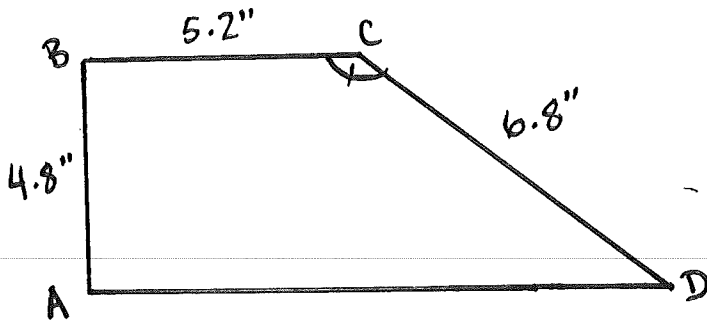
What is the height of the tree?



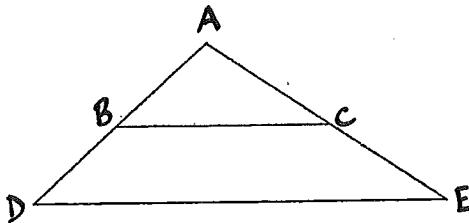
How long should a bridge be in order for it to cross the river?



Find the length of GH in the diagram below



Find the length of BC



$$\begin{aligned} AC &= 10 \text{ cm} \\ AE &= 18 \text{ cm} \\ DE &= 25 \text{ cm} \end{aligned}$$