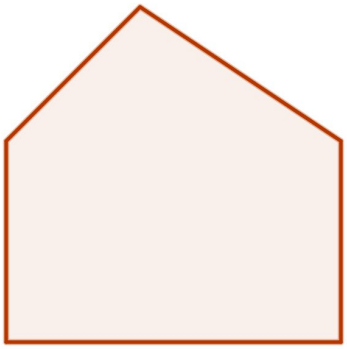
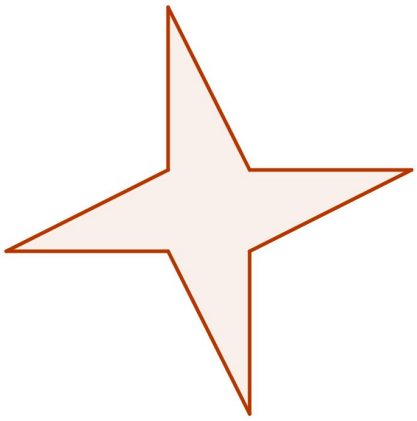
GeoMetry Area

Your task is to investigate an unfamiliar shape. You will discover a general formula for the area of your shape by using the formulas we developed for the areas of simpler shapes.

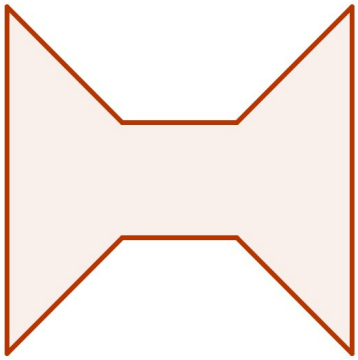
The Shapes



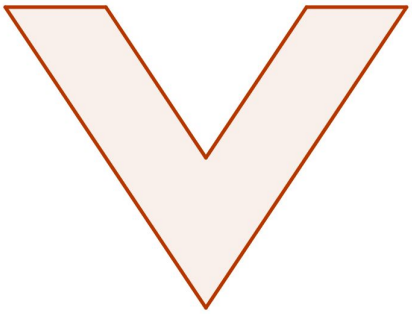
House



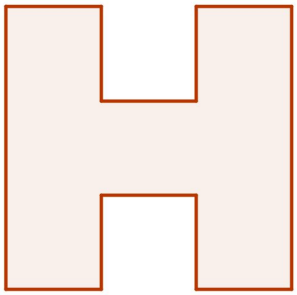
Star



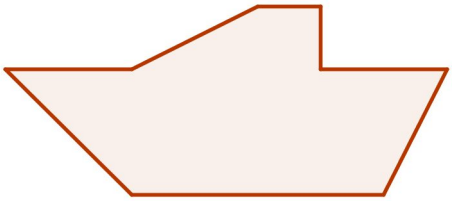
Bow Tie



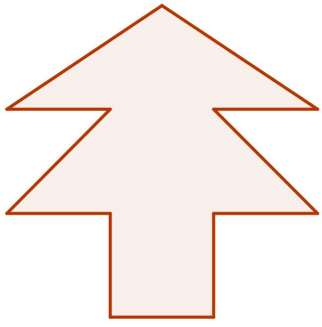
"V"



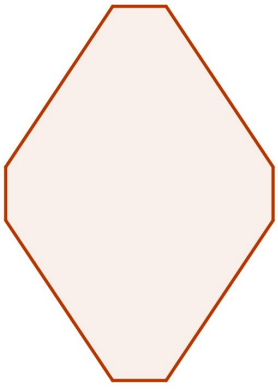
"H"



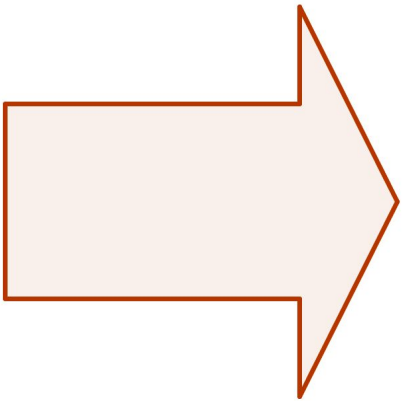
Boat



Tree



Octogon



Arrow

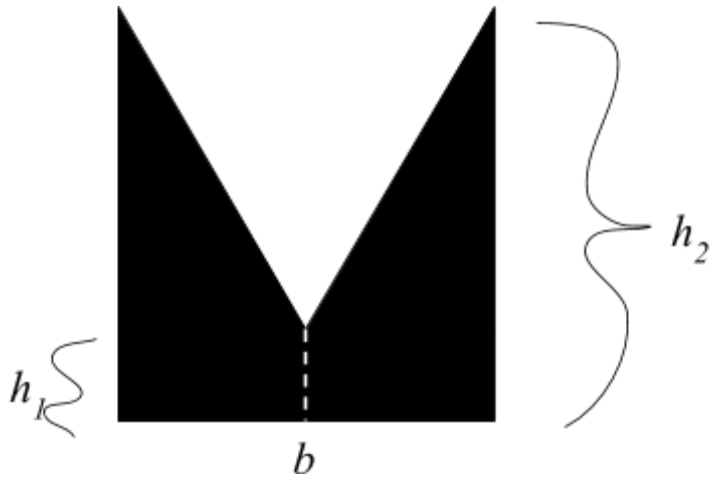
The steps you should take to investigate your shape are as below.

Poster Components

1. Make a poster in the shape of your chosen shape.
2. Find the area of your poster in square centimeters.
3. Determine which measurements of your share are important in determining the area and which are not important.
4. Create a formula for the area of your shape. Your formula should reflect the measurements you have determined to be important.

Off-Poster Components

5. Create one challenge problem about finding an unknown area. Your problem must use your chosen shape and at least one other shape. You should make ten copies of your problem to hand out.



Important: Both peaks of the "M" have the same height
Not important: The valley inside the shape is in the exact middle of the shape

Good Formula: $Area = \frac{b(h_1+h_2)}{2}$ **Less Good Formula**: $Area = \frac{(b_1+b_2)(h_1+h_2)}{2}$

Rubric

Each component is worth one point.