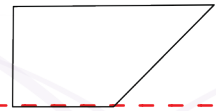
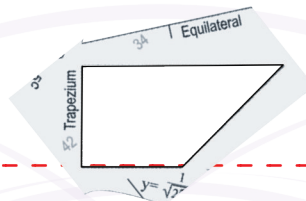




Irregular Polygon Enlargement Example

One of Three Ways to Enlarge - Translation.

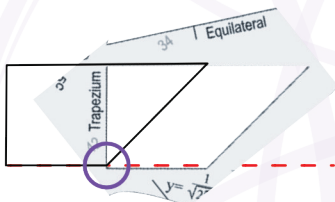
Shape
42



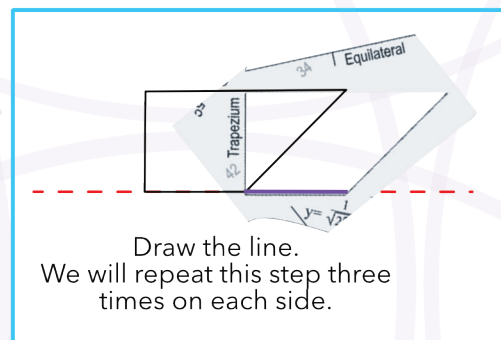
Start by drawing a guide line.
As we progress with the enlargement we will need these.

Draw the irregular shape, the Right-Angled Trapezium, lightly in pencil.

This is what the start should look like. There is already one side on the guideline. The bottom side.
The bottom side has been drawn once.

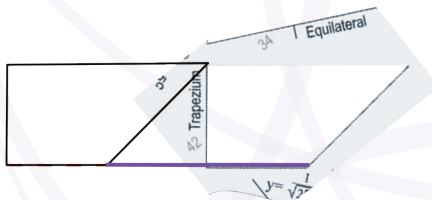


Place the template so that the side that will be produced is lined up with the vertex.
Remember we already drew the bottom side once!



Draw the line.
We will repeat this step three times on each side.

This step should be repeated for as many times as you want to enlarge the shape for. If you do this three times, you enlarge by a factor of three. If you do it twice, you enlarge by a factor of two. It is important that you whatever factor you choose to enlarge by, you use the same factor for each side.



Move the template to line up the vertex with the end of the line that was last drawn.
This was the second time the bottom-side was drawn.

Move the template again to line up the vertex with the end of the line that was last drawn.
This is the third line, so we draw the vertex and adjacent side as well.



.....Continued on the next page.

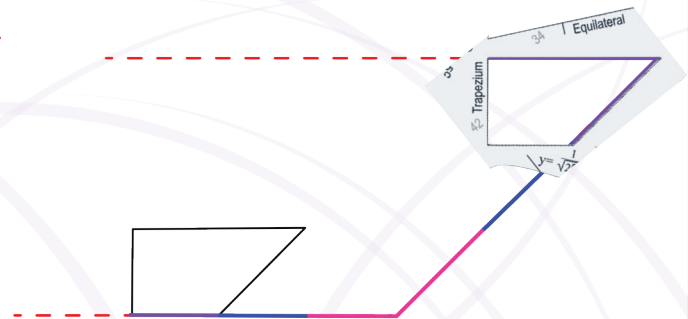
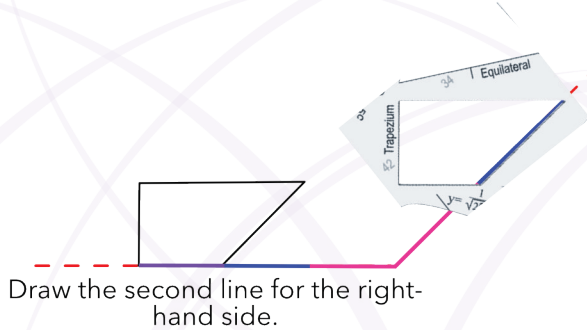
Use the ruler on the side and draw a guideline again. We will place the shape on this line to start the right-hand side. We will continue the steps as we did for the bottom side.
Move template three times and draw the vertex on the third translation.

We used the irregular Trapezium, but you can use any regular or irregular shape. See the Primary Unwrap for the regular shape enlargement.



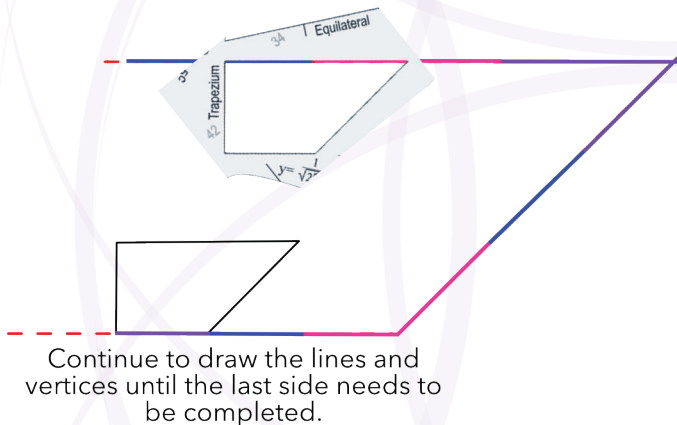
Irregular Polygon Enlargement

Enlarging an Irregular Polygon continued

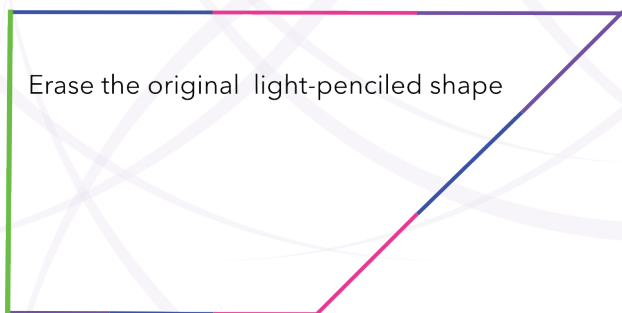


You will do this after each time the third line was drawn. (Because the factor of enlargement that we chose was three.)

You will do this after each time the third line was drawn. (Because the factor of enlargement that we chose was three.)



Your last side should also be three times longer than the template's shape corresponding side.



Can we prove this enlargement? Measure the sides of the original shape. Measure the sides of the enlargement. Take the lengths of the original shape's sides and multiply by three. (The factor we used) Does this result give us the side lengths of the enlargement?

Knowing the side lengths and multiplying them by the factor of enlargement is a quicker way to enlarge. You will still need to use the vertices to measure the angles even if you have the new side lengths.

