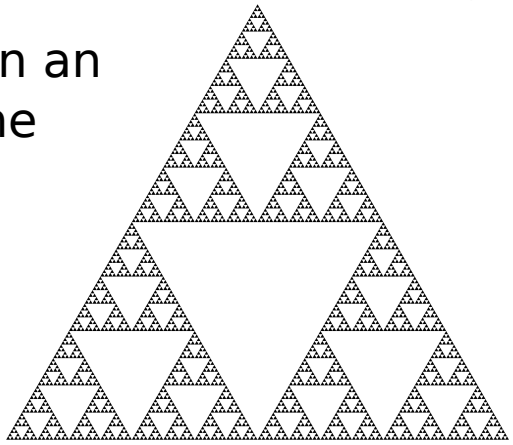
THINK MATHS

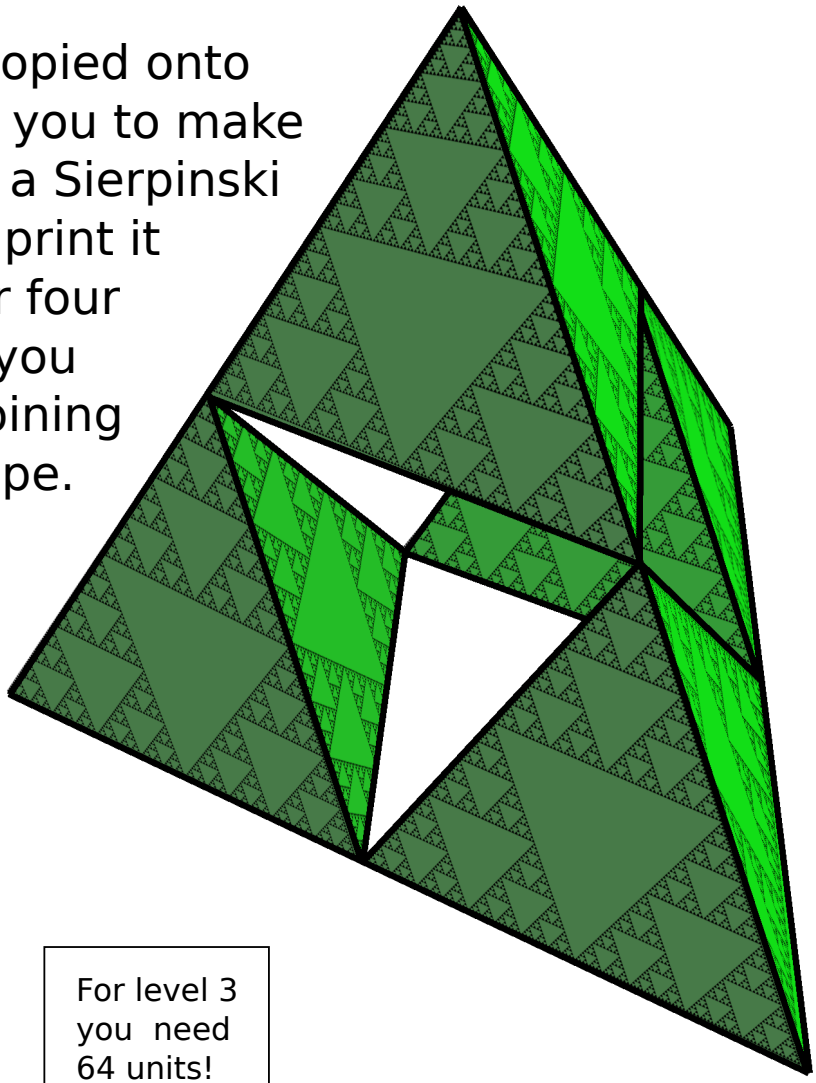
Sierpinski Tetrahedron

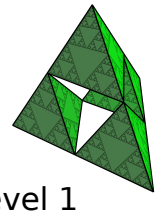
A Sierpinski Triangle is a fractal based on an equilateral triangle, made by dividing the triangle into four smaller triangles, removing the central triangle and then repeating for each of the three remaining triangles. If you repeat this process forever, you get a fractal.



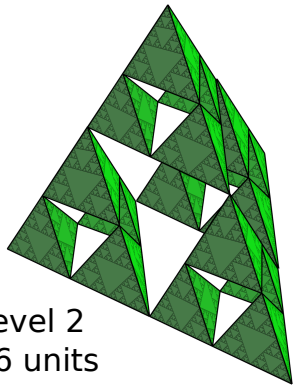
You can make a 3D version of the Sierpinski triangle - it's a tetrahedron (a shape with four triangular faces) made up of four smaller tetrahedra, with an empty space in the middle.

The attached sheet can be copied onto A3 or A4 card, and will allow you to make two tetrahedra, printed with a Sierpinski triangle on each face. If you print it twice, you'll have enough for four tetrahedra, which will allow you to make one larger one by joining them at the corners using tape. To make the next level up, make four of these larger tetrahedra and join them at the corners in the same way.

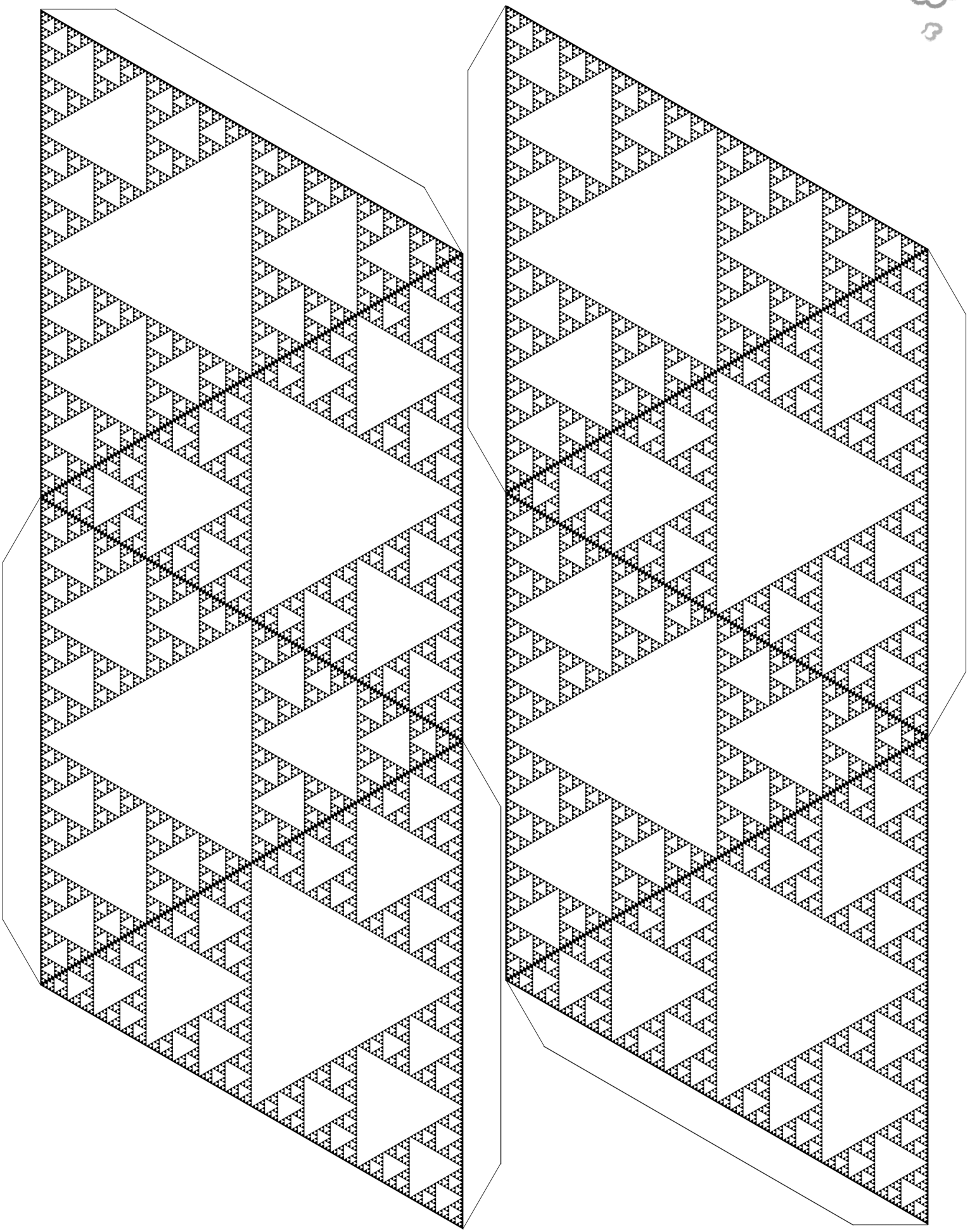




Level 1
4 units



Level 2
16 units

For level 3 you need 64 units!

What shape is the space left in the centre of your Sierpinski tetrahedron?
How many units would you need to make a tetrahedron 10m high?