

The diagram illustrates the recursive construction of a Sierpinski triangle. It starts with a single large triangle at the top. This triangle is divided into four smaller triangles by connecting the midpoints of its sides. The central triangle is removed, leaving three smaller triangles. This process is repeated recursively, with each of the three remaining triangles being further divided into four smaller triangles, and the central one removed. The diagram shows the first few levels of this construction, with the number of triangles increasing exponentially at each step. The final row shows a large number of small triangles, representing the fractal's self-similar structure.