# Sierpinski **Game**

Play in pairs. Decide who will go first. You'll need a ruler and a pen or pencil. Player 1 chooses a corner to start at: red, green or blue. Player chooses one of the nine small triangles pointing upwards as the target.

A move consists of moving your counter exactly halfway to one of the corners. So the move "red" means move halfway from where you are to the red corner. Player 1 has to find a combination of moves which move from the starting corner into the target triangle. The player has to get *inside* the triangle, not on any of its edges. Count the number of moves it takes – that's Player 1's score. Now swap over. Keep a total of the scores and see who can get the lowest score over several rounds.

Extension: Divide each triangle up into smaller triangles. If you choose a triangle pointing upwards how many moves does the other player need to get inside it?
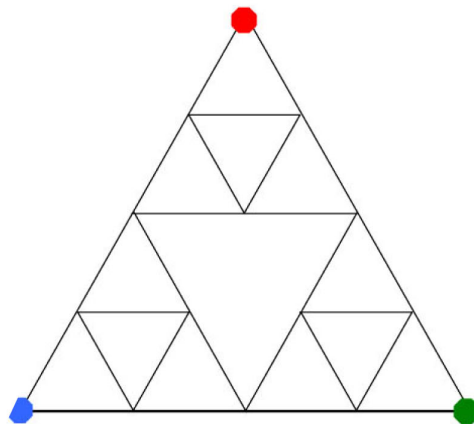
The Towers **of Hanoi**

Move the rings to the third tower so that they are arranged from biggest to smallest.

Rules:

1.   You can only move one ring at a time to a neighbouring tower.
2.   You cannot place a bigger ring on top of a smaller ring.
3.   Try to do this in the least number of moves possible.