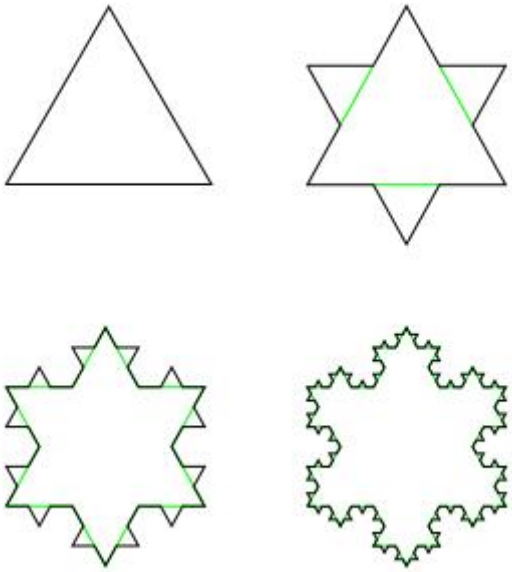
Eric Harmatz

Fractal Art Introduction

Infinity. It is a hard concept to grasp our minds around. *Going on forever and ever, with no end.* These fractals that you are looking at are also infinite. In these magical fractals, we take a pattern and replicate it over all edges infinite amounts of times. This is evident in the simple Koch Snowflake, shown below,



In this simple fractal, we see how the simple pattern of a triangle is repeated over all of the edges of this image. Now you may think these are just standard two dimensional objects, however, fractals have an interesting property in which they actually live between dimensions. We find what dimensions these amazing shapes live in by using a logarithmic function, the log(self similar objects) divided by the log(scaling factor)

Using this information, we find out that the Koch Snowflake lives in between the first and second dimension. The 1.26 dimension to be exact. Trippy.

The 12th Grade Math Class played with these properties to create art that would repeat infinitely. This is found in video games and digital animation to generates background imagery and other sprits. Enjoy admiring the projects, and while you do, take a look at the nature of our community garden. See if you can spot the self similar objects repeated infinitely in plants and how this concept of fractals is present in nature, in addition to digital generation.

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12th Grade
HTHMA