

Chaos Game Analysis
Math
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M330

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Introduction to the Chaos Game

The chaos game is an iterative process that will produce an image known as the Sierpinski triangle. The classification of images, such as the one generated by the chaos game, is a *fractal*. A fractal is an image that is created by a mathematical process. Before we talk more about fractals, let us first clearly denote the rules of the chaos game.

To play the chaos game:

1. Start by placing three points on a piece of paper. For the best results, try placing the points roughly in the three vertices of an equilateral triangle.
2. Next, select an initial point contained within the area of the vertices, or ontop of the invisible edges connecting the three vertices you drew.
3. Select one of the three vertices randomly. (You may use a dice or random number generator)
4. Draw a new point halfway between the randomly selected vertice and your initial starting point.
5. Repeat step 3.