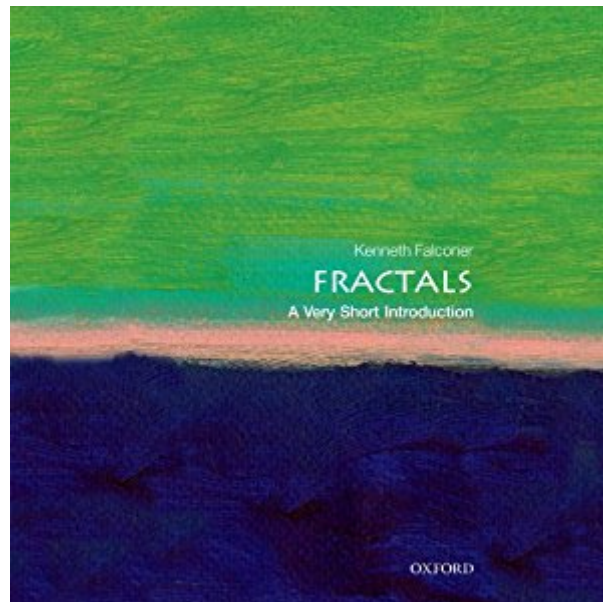# Fractals: A Very Short Introduction

Synopsis

Many are familiar with the beauty and ubiquity of fractal forms within nature. Unlike the study of smooth forms such as spheres, fractal geometry describes more familiar shapes and patterns, such as the complex contours of coastlines, the outlines of clouds, and the branching of trees. In this Very Short Introduction, Kenneth Falconer looks at the roots of the "fractal revolution" that occurred in mathematics in the 20th century, presents the "new geometry" of fractals, explains the basic concepts, and explores the wide range of applications in science, and in aspects of economics. This is essential introductory reading for students of mathematics and science, and those interested in popular science and mathematics.

Book Information

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Customer Reviews

This covers the basics well. It prepared me to read through Mandelbrot's "Fractal Geometry of Nature" with a good understanding of the ideas. It took me from "layperson" to "less laypersony." Great!

This is thrilling because you can plot examples yourself. Meaning that the whole thing is simple but the result will spray a complex beauty at your face. Behold! You are about to fall in love :-) Very entertaining book.

This book is well written but accessible only to those with some basic knowledge of geometric series

and trigonometry. Whatever "special" maths required are explained as succinctly as possible -- such as the basics behind complex numbers, squaring complex numbers, and a simple overview of the log laws. Falconer first explains the concept behind a fractal, then how to construct the classics of the Koch Curve and Sierpinski Triangle (and a few modifications of them), using this as a template for future consideration. He also stresses the idea of itineraries and iterative processes. Discussion of self-similarity leads us through templates and self-affine fractals, and paves the way for a most interesting and informative chapter on fractal dimension.

The writing was clear and concise---a good introduction. It is especially good at explaining the differences in the various fractals.

Love this series. Well written and argued.

Clear, concise, adn to the point.

Fractals: A Very Short Introduction (Very Short Introductions) Fractals: A Very Short Introduction Computer Science: A Very Short Introduction (Very Short Introductions) Documentary Film: A Very Short Introduction (Very Short Introductions) Human Rights: A Very Short Introduction (Very Short Introductions) Colonial America: A Very Short Introduction (Very Short Introductions) American History: A Very Short Introduction (Very Short Introductions) Law: A Very Short Introduction (Very Short Introductions) The Tudors: A Very Short Introduction (Very Short Introductions) The Vikings: A Very Short Introduction (Very Short Introductions) Philosophy of Law: A Very Short Introduction (Very Short Introductions) The Palestinian-Israeli Conflict: A Very Short Introduction (Very Short Introductions) Ancient Assyria: A Very Short Introduction (Very Short Introductions) The Napoleonic Wars: A Very Short Introduction (Very Short Introductions) History: A Very Short Introduction (Very Short Introductions) American Immigration: A Very Short Introduction (Very Short Introductions) Crime Fiction: A Very Short Introduction (Very Short Introductions) The Beats: A Very Short Introduction (Very Short Introductions) Modernism: A Very Short Introduction (Very Short Introductions) Dada and Surrealism: A Very Short Introduction (Very Short Introductions)