

The distribution of prime numbers hidden within a fractal binary pattern

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Abstract

Number theorists have long questioned why primes seem to be scattered randomly among the integers, with no apparent pattern. In fact, every method and analysis employed to search for possible correlations in and between primes has revealed very little with respect to the underlying nature of their distribution. In this paper, we propose a binary-coded decimal (BCD) representation for all positive integers, and demonstrate that the resulting infinite pattern is a fractal. Consequently, we prove that primes numbers follow a schematic (with respect to the twin primes) distribution within the self-similar structures of this fractal binary pattern as shown in the figure.

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Figure 12

Fractal Binary Pattern (TOP VIEW)