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The Prime Numbers Without the Sieve of Eratosthenes, Fibonacci Quart. 55 (2017), no. 4, 352-356.


#### Abstract

The question of enumerating the sequence of the prime numbers is one of the oldest and most fruitful in all of mathematics. In this paper, we propose a simple new recursive technique (essentially different from all sieve methods, including the original one due to Eratosthenes) for explicitly listing the primes; and it is based only on a new general density hypothesis concerning their overall distribution. The currently conditional status of this iterative device is offset by at least one major advantage: formulation of a self-perpetuating principle unhindred by fixed magnitudes and bounds that limit all sieves.


