

Comparison of 3 different prime formulas

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The Riemann conjecture solution does not reveal all of the prime numbers.

Abstract

The purpose of this short paper is to deepen the basic knowledge of prime numbers, focusing on the prime number generation formula. The prime number generating equation has been analyzed to some extent, and I would like to contribute to it.

General comments

It is thought that the larger n, where the first prime number appears, the larger the prime accuracy of the equation, but there is no proof yet.

Existence of prime numbers for n

Formula	$n^2 + n + 41$ (Euler) (n=0 to 40, all primes)	$36n^2 - 810n + 2753$ (Ruby) (n=0 to 44, all primes)	$4n^2 - 18n + 3547$ (Masuda) (n=0 to 22, all primes)
$0 \leq n \leq 10$	11(100%)	11(100%)	11(100%)
$0 \leq n \leq 50$	47(92.16%)	50(98.04%)	39(76.47%)
$0 \leq n \leq 100$	87(86.14%)	78(77.23%)	61(60.39%)
$0 \leq n \leq 700$	434(61.91%)	384(54.78%)	314(44.79%)

Ratio of non-prime numbers to n

