Research
Carolin Zöbelein

Research notes

Primes (part 01): Recursion basics

Carolin Zöbelein[1]

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Carolin Zöbelein
Independent mathematical scientist

E-Mail: contact@carolin-zoebelein.de
PGP: D4A7 35E8 D47F 801F 2CF6 2BA7 927A FD3C DE47 E13B
Website: `https://research.carolin-zoebelein.de`

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[1] PGP signing key (NOT for communication!): 8F31 C7C6 E67E 9ACE 8E12 E2EF 0DE3 A4D3 BA87 2A8B

Abstract

This notes give an overview over all necessary items for calculating prime numbers (only odds, we always ignore number 2) recursively. We start, with the assumption that we know that 3 and 5 are prime numbers. We define equations which gave us all numbers which not belong to their time tables, do an intersection of this, and hence determine the next prime numbers from this. So we can do the same thing again. Taking all our knowing prime numbers, 3, 5 and the new ones, can define equations for the numbers which not belong to this time tables, do an intersection of this, and hence get the new prime numbers.
This notes talks about all aspects which we have to consider to do so, and shows that we always have all necessary information to do this recursion without limitations. Since, we are also able to determine a closed analytical equation for the intersection of an arbitrary number of intersection, we are also able to do an recursive considering of it.
In future work, it is still necessary to think about a nicer describing equation of this intersection, to find a better presentation of the final recursion formula.

Content