

Sondow, Jonathan; Nicholson, John W.; Noe, Tony D.

Ramanujan primes: bounds, runs, twins, and gaps. (English) Zbl 1229.11014

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The n th Ramanujan prime is the smallest positive integer R_n such that if $x \geq R_n$, then the interval $(\frac{1}{2}x, x]$ contains at least n primes. The authors prove that the maximum of R_n/p_{3n} is $R_5/p_{15} = 41/47$. They present statistics on the length of the longest run of Ramanujan primes among all primes $p < 10^n$, for $n \leq 9$. If an upper twin prime is Ramanujan, then so is the lower. Runs of Ramanujan primes are related to prime gaps. An appendix explains Noe's fast algorithm for computing R_1, R_2, \dots, R_n .

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MSC:

[11A41](#) Primes

Cited in **1** Review
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Keywords:

[Ramanujan prime](#); [twin prime](#); [prime gap](#)

Software:

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