

Re: Length of sequence of consecutive primes starting at 2

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From: Robert Silverman (*anonymous_at_mathforum.org*)

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On 20 Jul 2004, Joseph Weinberg wrote:

>*rsilverman@draper.com (Bob Silverman) wrote in message news:<200407191526.i6JFQck07076@proapp.mathforum.org>...<snip>*

>*"known" consecutive primes. What I mean by consecutive primes is the >following. The sequence 2,3,5,7,11,13 is made up of consecutive >primes while the sequence 2,3,5,11,13 is not (it's missing the prime >number 7). Understand what I mean? And yes, I mean the largest list >that has ACTUALLY been published.*

Such a list is going to be fairly small. The largest PUBLISHED list I know is VERY old and was published by D.N. Lehmer. It goes up to 10 million. Modern researchers might have somewhat larger tables stored on disk somewhere but I can't image the need to store such a table beyond (say) 10^9 or so. Computational number theorists, if they need primes to (say) 10^{12} would generate them as needed.

>
>> *(3) If you mean that you are looking for a list of ALL primes below >> a certain bound and you want the list with the largest bound that has >> actually been calculated, I can tell you that such a list does not >> exist per se. Or rather, that such a list changes constantly, so you >> are asking for a moving target. It is also one thing to calculate >> such a list, it is another to store and publish it.*
>
>*OK. Can I find the largest upper bound published somewhere? It's OK >if the bound is slightly outdated.*

May I ask why you need ALL the primes? As I stated, at one time or another all primes up to about 10^{12} have been generated. I doubt if ANYONE knows what the largest upper bound truly is. It is at least 10^{12} .

>
>> *(4) If you want a list of primes up to some bound B, it would be >> faster to generate it via a sieve than to read it over the internet.*

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>> *And storage for any reasonable B would be problematic. You are*
>> *talking terabytes.*