

Re: Density of sequence questions

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In article

<19599177.78181.1246866592606.JavaMail.jakarta@xxxxxxxxxxxxxxxxxxxxxxxxxx>, "Richard L. Peterson" <rl_pete@xxxxxxxxxx> wrote:

I asked:

I should have asked also: If q is cofinite in P , does Q have pos. density or at least positive limsup in N ?

Gerry Myerson replied, in part:

"I think that one's easy. If q is missing only the primes p_1, p_2, \dots, p_n , then Q is missing only the numbers not relatively prime to $A = (p_1)(p_2)\dots(p_n)$, and you can work out the density of those via the Euler phi-function." Great, so from that is the density of Q wrt $N = (a-1)^*(b-1)^*../(a*b*..)$ where a, b, \dots are the finite list of primes not in q ? If so I think we can calculate a sequence of densities of Q when q is not cofinite—arrange the p_i in increasing order and the k th density is the product $(p_1-1)^*\dots(p_k-1)$ divided by $p_1^*..p_k$. Each density in this sequence would be an upper bound for any later density, and this sequence should converge to the limit density. Is this true? Thanks.

I may have mentioned earlier in this thread that the keyphrase here is "sieve methods." There are books on the topic, and undoubtedly web pages as well. Have a look.

—
Gerry Myerson (gerry@xxxxxxxxxxxxxxxxxxxx) (i -> u for email)