



Mathematics > Number Theory

When the sieve works

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We are interested in classifying those sets of primes P such that when we sieve out the integers up to x by the primes in P^c we are left with roughly the expected number of unsieved integers. In particular, we obtain the first general results for sieving an interval of length x with primes including some in $(\sqrt{x}, x]$, using methods motivated by additive combinatorics.

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