

Russian Mathematics 2014 vol.58 N8, pages 43-48

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## On distribution of semiprime numbers

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### Abstract

A semiprime is a natural number which is the product of two (possibly equal) prime numbers. Let  $y$  be a natural number and  $g(y)$  be the probability for a number  $y$  to be semiprime. In this paper we derive an asymptotic formula to count  $g(y)$  for large  $y$  and evaluate its correctness for different  $y$ . We also introduce strongly semiprimes, i.e., numbers each of which is a product of two primes of large dimension, and investigate distribution of strongly semiprimes. © 2014 Allerton Press, Inc.

<http://dx.doi.org/10.3103/S1066369X14080052>

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### Keywords

distribution of semiprimes, factorization of integers, semiprime integer, strongly semiprime, the RSA ciphering method