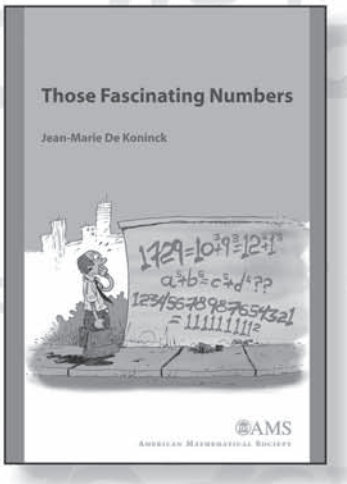
AMERICAN MATHEMATICAL SOCIETY



Those Fascinating Numbers

Jean-Marie De Koninck, *Université Laval, Quebec, QC, Canada*

Who would have thought that listing the positive integers along with their most remarkable properties could end up being such an engaging and stimulating adventure? The author uses this approach to explore elementary and advanced topics in classical number theory. A large variety of numbers are contemplated: Fermat numbers, Mersenne primes, powerful numbers, sublime numbers, Wieferich primes, insolite numbers, Sastry numbers, voracious numbers, to name only a few. The author also presents short proofs of miscellaneous results and constantly challenges the reader with a variety of old and new number theory conjectures.

This book becomes a platform for exploring new concepts such as the index of composition and the index of isolation of an integer. In addition, the book displays several tables of particular families of numbers, including the list of all 88 narcissistic numbers and the list of the eight known numbers which are not prime powers but which can be written as the sum of the cubes of their prime factors, and in each case with the algorithm used to create them.

Translated by Jean-Marie De Koninck

2009; 426 pages; Softcover; ISBN: 978-0-8218-4807-4; List US$49; AMS members US$39; Order code MBK/64

For many more publications of interest, visit the AMS Bookstore

www.ams.org/bookstore