Abstract

This book celebrates the 300th birthday of Leonhard Euler (1707-1783), one of the brightest stars in the mathematical firmament. The book stands as a testimonial to a mathematician of unsurpassed insight, industry, and ingenuity-one who has been rightly called "the master of us all."The collected articles, aimed at a mathematically literate audience, address aspects of Euler's life and work, from the biographical to the historical to the mathematical. The oldest of these was written in 1872, and the most recent dates to 2006.
Some of the papers focus on Euler and his world, others describe a specific Eulerian achievement, and still others survey a branch of mathematics to which Euler contributed significantly.Along the way, the reader will encounter the Königsberg bridges, the 36-officers, Euler's constant, and the zeta function. There are papers on Euler's number theory, his calculus of variations, and his polyhedral formula. Of special note are the number and quality of authors represented here. Among the 34 contributors are some of the most illustrious mathematicians and mathematics historians of the past century, including Florian Cajori, Carl Boyer, George Pólya, André Weil, and Paul Erd?s. And there are a few poems and a mnemonic just for fun.

Inhalt

Sved and Dave Logothetti (1989) - Bell's Conjecture (a poem), J. D. Memory (1997) - A Response to "Bell 's Conjecture "(a poem), Charlie Marion and William Dunham (1997)
Mathematics: Euler and Infinite Series, Morris Kline (1983) - Euler and the Zeta Function, Raymond Ayoub (1974) - Addendum to: Ëuler and the Zeta Function, Ä. G. Howson (1975) - Euler Subdues a Very Obstreperous Series (abridged), E. J. Barbeau (1979) - On the History of Euler's Constant, J. W. L. Glaisher (1872) - A Mnemonic for Euler's Constant, Morgan Ward (1931 - Euler and Differentials, Anthony P. Ferzola (1994) - Leonhard Euler 's Integral: A Historical Profile of the Gamma Function, Philip J. Davis (1959) - Change of Variables in Multiple Integrals: Euler to Cartan, Victor J. Katz (1982) - Euler's Vision of a General Partial Differential Calculus for a Generalized Kind of Function, Jesper Lützen (1983) - On the Calculus of Variations and Its Major Influences on the Mathematics of the First Half of Our Century, Erwin Kreyszig (1994) - Some Remarks and Problems in Number Theory Related to the Work of Euler, Paul Erd?s and Underwood Dudley (1983) - Euler's Pentagonal Number Theorem, George E. Andrews (1983) - Euler and Quadratic Reciprocity, Harold M. Edwards (1983) - Euler and the Fundamental Theorem of Algebra, William Dunham (1991) - Guessing and Proving, George Pólya (1978) - The Truth about Königsberg, Brian Hopkins and Robin J. Wilson (2004) - Graeco-Latin Squares and a Mistaken Conjecture of Euler, Dominic Klyve and Lee Stemkoski (2006)