

Titles from the AMS

Mathematics Education Collection

The AMS is pleased to spotlight several new and classic titles in our growing collection of Mathematics Education books. These publications are valuable resources for current and future mathematics teachers, and collectively span the educational spectrum from the preschool through collegiate levels.



INTEGERS, FRACTIONS AND ARITHMETIC A GUIDE FOR TEACHERS

Judith D. Sally,
Northwestern University, Evanston, IL,
and Paul J. Sally, Jr., *University of Chicago, IL*

This book, which consists of twelve interactive seminars, is a comprehensive and careful study of the fundamental topics of K-8 arithmetic. The guide aims to help teachers understand the mathematical foundations of number theory in order to strengthen and enrich their mathematics classes. Five seminars are dedicated to fractions and decimals, and the remaining seminars cover standard topics in detail, albeit in a slightly unconventional order. The book is intended for the professional development of teachers and is appropriate for teacher education programs, as well as for enrichment programs such as Mathematical Circles for Teachers.

Titles in this series are co-published with the Mathematical Sciences Research Institute (MSRI).

MSRI Mathematical Circles Library, Volume 10; 2012; 208 pages; Softcover; ISBN: 978-0-8218-8798-1; List US\$39; AMS members US\$31.20; Order code MCL/10



GEOMETRY A GUIDE FOR TEACHERS

Judith D. Sally,
Northwestern University, Evanston, IL, and Paul J. Sally, Jr., *University of Chicago, IL*

Concepts in plane and solid geometry are carefully explained, and activities that teachers can use in their classrooms are emphasized. The book should give teachers a firm foundation on which to base their instruction in the elementary and middle grades. In addition, it should help teachers give their students a solid basis for the geometry that they will study in high school.

Titles in this series are co-published with the Mathematical Sciences Research Institute (MSRI).

MSRI Mathematical Circles Library, Volume 3; 2011; 202 pages; Softcover; ISBN: 978-0-8218-5362-7; List US\$39; AMS members US\$31.20; Order code MCL/3



THE MATHEMATICAL EDUCATION OF TEACHERS II

This report is an important resource for those who teach mathematics and statistics to current and future PreK-12 mathematics teachers. It makes recommendations for the mathematics that teachers should know and how they should come to know that mathematics. It also urges greater involvement of mathematicians and statisticians in teacher education so that the nation's mathematics teachers have the knowledge, skills, and dispositions needed to provide students with a mathematics education that ensures high school graduates are college- and career-ready as envisioned by the Common Core State Standards.

This series is published in cooperation with the Mathematical Association of America.

CBMS Issues in Mathematics Education, Volume 17; 2012; 86 pages; Softcover; ISBN: 978-0-8218-6926-0; List US\$33; AMS members US\$26.40; Order code CBMATH/17



AXIOMATIC GEOMETRY

John M. Lee, *University of Washington, Seattle, WA*

The story of geometry is the story of mathematics itself. This book tells the story of how the axiomatic method has progressed from Euclid's time to ours, as a way of understanding what mathematics is, how we read and evaluate mathematical arguments, and why mathematics has achieved the level of certainty it has. It is designed primarily for advanced undergraduates who plan to teach secondary school geometry, but it should also provide something of interest to anyone who wishes to understand geometry and the axiomatic method better.

Pure and Applied Undergraduate Texts, Volume 21; 2013; approximately 473 pages; Hardcover; ISBN: 978-0-8218-8478-2; List US\$75; AMS members US\$60; Order code AMSTEXT/21



UNDERSTANDING NUMBERS IN ELEMENTARY SCHOOL MATHEMATICS

Hung-Hsi Wu, *University of California, Berkeley, CA*

[This book] delivers the mathematical knowledge that elementary-grades teachers need.

—*American Educator*

This is a textbook for pre-service elementary school teachers and for current teachers to refer to for explanations of well-known and until now unexplained facts. Wu provides a comprehensive treatment of all the standard topics about numbers in the school mathematics curriculum: whole numbers, fractions, and rational numbers. Assuming no previous knowledge of mathematics, the presentation develops the basic facts about numbers from the beginning and thoroughly covers the subject matter for grades K through 7.

2011; 551 pages; Hardcover; ISBN: 978-0-8218-5260-6; List US\$79; AMS members US\$63.20; Order code MBK/79



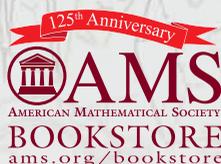
MATH FROM THREE TO SEVEN THE STORY OF A MATHEMATICAL CIRCLE FOR PRESCHOOLERS

Alexander Zvonkin, *Université Bordeaux I, Talence, France*

As anyone who has taught or raised young children knows, mathematical education for little kids is a real mystery. This book is a captivating account of a professional mathematician's experiences conducting a math circle for preschoolers in his apartment in Moscow in the 1980s.

Titles in this series are co-published with the Mathematical Sciences Research Institute (MSRI).

MSRI Mathematical Circles Library, Volume 5; 2011; 300 pages; Softcover; ISBN: 978-0-8218-6873-7; List US\$39; AMS members US\$31.20; Order code MCL/5



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