




# Writing to Learn Mathematics

Strategies That Work

Joan Countryman





Investigating interesting problems about the world makes mathematics compelling and engaging, but many students in elementary and secondary school experience math only as a set of rules and procedures to memorize and repeat on tests.

Writing frees students of the idea that mathematics is a collection of right answers dispensed by teachers. As Joan Countryman demonstrates in *Writing to Learn Mathematics*, the use of journals, learning logs, letters, autobiographies, investigations, and formal papers can dramatically improve the reasoning abilities of students at all grade levels. The text describes writing activities classroom teachers can use to enhance the learning of math and includes examples of student writing, from short journal entries to excerpts from longer research papers. Most helpful are suggested topics to explore at different levels of the primary and secondary mathematics curriculum, and the accompanying descriptions of student responses to these presentations.

Readers of *Writing to Learn Mathematics* will discover how writing can help students develop concepts and thinking skills as well as free them to recognize what they know—and what they want to explore further—about mathematics.

**Joan Countryman** is head of Lincoln School in Providence, Rhode Island. She taught mathematics at Germantown Friends School in Philadelphia for twenty-three years and was a lecturer in the Graduate School of Education at the University of Pennsylvania. She has also worked with the Woodrow Wilson National Fellowship Foundation as a master teacher. Joan has lectured extensively on new trends in elementary and secondary mathematics education, on gender and mathematics, and on the use of writing in mathematics classes. Her approach to teaching and learning mathematics is described by William Zinsser in a chapter of his recent book, *Writing to Learn*.

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