

Why Teach Mathematics?

A Focus on General Education

by

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The cultural and practical significance of mathematics in our society contrasts strikingly with the way adolescents experience mathematics in school. Mathematics teaching, it appears, succeeds in promoting abilities related to systematical and critical thinking, to problem solving, and to formulating rational arguments only for a minority of students. In this book, the author discusses a modern concept of general education that then helps to clarify both curricular and pedagogical deficits involved in conventional mathematics instruction. Thus, an outline of an alternative mathematics instruction can be provided – instruction that can justifiably claim to aim at concrete realization of the idea of general education.

Why Teach Mathematics? presents detailed arguments for seven interconnected objectives of a school system aiming at general education. A specific concept of general education involving these seven objectives serves as a criterion for a critique of the current widespread form of mathematics instruction, identifying its deficits and determining which innovations are necessary. Existing concepts of mathematics teaching are reexamined and assessed in the light of the concept of general education. Finally, the book provides a profile of an alternative mathematics instruction that can, indeed, help to realize a general education.



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