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Abstracts of Short Communications and Posters

Section:

18. Teaching and Popularization of Mathematics

1991 MS Classification: 00
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Using elements of mathematics in teaching (Poster session)

By *elements of mathematics* we mean aspects of mathematics that characterize the subject. Usually only a very minor number of these elements is ever visible in the practice of teaching mahtematics as well as mahtematics textbooks, and even a fewer number is emphasized. We propose to expand the use of these elements to better reflect the essence of mathematics and its versatility. We show through examples how to underline the following elements of mathematics: applicability, abstraction, generalization, notation, surprise and magic, relationships with language, explanation of the infinite, computation, creativity, history, rigour, formalism, novelty, fashion, dualizing principles, axioms, definitions and proofs, interpretation and modeling, universality, culture dependence.