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Austrian Center for Didactics of Computer Algebra

MuPAD as a Tool, Tutee and Tutor

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Abstract:

Modern Computer-Algebra-Systems (CAS) are not suitable for teaching elementary algebra to school classes from year 7 to 10. The use of CAS in schools requires a sophisticated user interface and specialized methods for school usage. The system should compute step-by-step and must keep the order of subexpressions. We develop such a tutorial CAS based on MuPAD. It will give warnings, when the student makes a mistake or tries to make a step, which is not appropriate for the solution of the problem at hand. Further, the system offers help on request suggesting appropriate next computational steps. All this will be possible for arbitrary problems entered by the student.