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Obstacles in combining the use of various tools in solving mathematical problems – why is Copy/Paste often useless

In first cycle professional study program Practical Mathematics at Faculty of mathematics and physics, University of Ljubljana, a course entitled Computer tools in mathematics is proposed. Its syllabus is primarily focused on approaches towards solving mathematical tasks with a computer, mostly with the programs for numerical and symbolic calculations, such as Wolfram's Mathematica, Matlab, GeoGebra.

As mathematical software is diverse and rich and each software can perform some tasks very well and others only with great efforts, we decided to use various tools, and not to focus on a single one. This included also tools to create learning content such as word processors. We envisioned a scenario where students work with several systems, exchange the mathematical objects from one to the other and use mathematical objects in reports. Students naturally expect to do this using the copy and paste functions. However, such exchanges are often bumpy: special copy functions, plain-text adjustments, or careful verification must often be used.

The students, and we, explored transfers of mathematical objects between various programs using copy and paste: the expectations of the students and their observations are reported. The experiments show a multitude of issues. It appears that copy and paste for regular desktop users is not yet the object of mainstream testing in mainstream tools to create content. However, many technical possibilities exist and seem to be promising.