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About a Computer Algebra based online Mathtest

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Abstract

The article describes the online mathematics test
<http://lie.math.brocku.ca/mathtest>, its typical applications and experiences gathered.

1 Introduction

This article reports on a test of (mostly) computational skills which is accessible online under <http://lie.math.brocku.ca/mathtest>. The idea for such an automated mathematics test emerged during an earlier employment of TW at a university with about 130 students starting in mathematics each year. Many of them had a weak mathematical background and even fewer computational skills. The intention was to create a tool that identifies weaknesses, which is neither embarrassing to the student nor to the lecturer/TA when checking repeatedly how to do very simple operations, like adding rational numbers. The test can be repeated endlessly without requiring much supervision. The result was an online test that was used during the last 6 years (now at a different university for currently different purposes). It was slowly improved and extended, typically at the end of each academic year.

2 The Test

The test web page has the following characteristics.