Applications of Autonomous Computational Methods for Finding Step-by-Step Solutions

Andrew Pownuk

The University of Texas at El Paso, El Paso, Texas, USA

Abstract

In order to increase the quality of teaching it is good to create sample assignments related to every particular topic.

By using autonomous computational methods it is possible to automatically create wide range of step-by-step assignments. The results of the calculations are generated in latex. In this presentation sample application to differential and integral calculus will be presented.

The method can create thousands of sophisticated assignments in a relatively short time.

By using presented approach it is possible to automatically create algorithm for solution of simply assignments and later automatically apply it for solution of a given class of problems.

Presented methodology can be extendend to many other topics in mathematics and other sciences.