Math Partner and Math Tutor

Gennadi Malaschonok and Natasha Malaschonok

Abstract. We consider the main features of the Web service Math Partner, as the training system (Math Tutor), which is designed to automate the work of the teacher.

Currently, there are a lot of training systems both local, which are installed on users’ computers, and «cloud», which are available in online mode. The main advantage of the system Math Partner in comparison with other learning systems is a multi-level feedback. It allows students to bring their solution of a problem to the correct result under the control of MathPartner.

Let us dwell on the description of the main features which allow to consider Web service Math Partner as a learning system that enables to automate the work of teachers.

1. A user if he is a student may register himself in the system MathPartner, but it is not necessary. The standard process of using the system supposes the registration by the administrator of educational institution.

2. Logging in with his password, the student will be able to use his curriculum, which must be loaded by his administrator or a teacher.

3. The solution of each task of the test must be put in the workbook of the student just after the task (online).

4. After finishing the solution of the test the student asks to check it. The system checks and informs the student about the rightness or wrongness of his answer. If the solution is wrong, the student returns and corrects it. He has the opportunity to look at the right solution if he can not solve the problem himself.

5. We organize two modes of problem solving: the student’s independent work and tests. In the mode of control work a student can not know whether he solved the problem correct or not until he finishes all tasks.

6. The system calculates and stores the percentage of correctly solved problems of the test. It saves information about the number of attempts to solve each task.
7. In the mode of control work the student can keep all the solutions of problems in one file and send it to the teacher, if he doubts in the correctness of evaluations obtained from the system.

8. The system logs all events and keeps records available to all individuals who are interested in the successful completion of the educational process.

Let us dwell on the rules of recording solutions in the cloud workbook. The Language of the System is a dialect of TeX. Immediately after entering the system compiles the solutions resulting text into the PDF file, the solution of the problem is shown in the input field. The student can switch the form of notebook from the input language into the pdf-view and back by means of the system.

Conclusion

The system "MathPartner" as a mathematical web service exists during five years (for details see Ref. [1-4]). Now this service can be used for teaching math and other subjects in secondary schools and in higher education.

References


Gennadi Malaschonok
Institute of Mathematics, Physics and Informatics
Tambov State University
Tambov, Russia
e-mail: malaschonok@ya.ru

Natasha Malaschonok
Institute of Mathematics, Physics and Informatics
Tambov State University
Tambov, Russia
e-mail: namalaschonok@gmail.com