CAT Summer 2014 Pedagogy Grant Report
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Summary Report
I used the CAT pedagogy grant for Summer 2014 to help me implement an online homework
system for our introductory calculus courses. I assembled questions for the online system
that will help in at least three of our calculus courses, comprising roughly 10 sections each
year. My intention is for this system to become a regular part of these courses and to benefit
our students and the Math/CS department for the foreseeable future.

I installed the homework system WeBWorK on a local server, then spent most of my time
identifying and adapting questions to our specific needs. I created a series of assignments
appropriate for our Math 170 course. Many of these questions came from existing problem
libraries shared by mathematics educators across the country. Many other questions I
needed to code from scratch to fit our department’s specific needs.

One of the greatest strengths of online homework which we observed this fall is the instant
feedback it can provide. When a student submits an answer to a question, the system tells
her immediately whether or not the answer is correct. If the answer is incorrect, the student
has the opportunity to try again (usually with a small penalty). This encourages the students
to put careful effort into each and every question. Sometimes on paper assignments students
will just hand in what they feel is “good enough” then not receive feedback until the instructor
returns the graded assignment days later. The online system encourages them to keep trying
until they get it right.

I look forward to expanding the use of the system to more courses in our department. I would
like to thank CAT for the opportunity to implement this system at Moravian.