Preparing the Under-prepared Math Students.

Preliminary report.

Many students, even those who aspire to be math teachers, are often found underprepared for a mathematics course. They cannot see the relation between an English statement and its formalization in a mathematical notation, and they don’t really know how to study mathematics. Some of our students admit that they can not describe, with certainty, any of the mathematical concepts they learned from a previous math course. They also appear to have a difficult time in clearly explaining a learned math idea in their writing. During a few semesters teaching experience and investigation, we learned that our underprepared students need a frequent and short practice giving them at each point to apply newly learned concepts, opportunity to clearly explain an idea to others, also the immediate and individual feedback on homework or classwork.

As a result, we organized our lectures, class activities, and assignments with the emphasis on those needs. In my talk, I will present examples of a few methods we used to help students to dispel their lack of confidence and fear of mathematics. We will also talk about things we can do to help our students to develop better understanding of the subject matter and ability of using mathematics to solve practical problems. (Received October 05, 2004)