



# **Early Assessment Program**

## **Strengthening Mathematics Instruction**

### ***Students Solving Cognitively Complex Problems***

**2011 - 2012**

Strengthening Mathematics Instruction (SMI) is an EAP professional development program for high school math teachers. The fundamental intent of SMI is to increase student performance on course, state and college entrance exams. This in turn will increase their readiness for college level mathematics. The SMI curriculum modules are designed to be used with current course content and textbooks.

#### ***The Professional Development Consists of:***

- Approximately 14 hours of training (one Saturday @ 6 hours; four afterschool sessions @ 2 hours each) on 7 modules
- Recognizing cognitively complex problems and how to effectively incorporate them into lessons.
- A bank of standards-based and curriculum-related problems for use in classrooms
- A bank of sample lesson plans that highlights the instructional strategies and mathematics content of the modules

#### ***The 7 Modules Include:***

- Presentation of a variety of strategies for teaching students how to solve complex problems
- Instruction on developing cognitively complex problems using current course curriculum
- Looking at student misconceptions
- Teaching strategies to promote mathematical and numeric flexibility and to incorporate multiple representations
- Support to improve student performance on CSTs, the EAP, SATs