

Statement of the Minnesota Council of Teachers of Mathematics regarding Minnesota Mathematics Academic Standards

Minnesota teachers have been studying and implementing mathematics standards since 1989 when the first national standards in mathematics were published.

Minnesota students have demonstrated successful patterns of achievement on important measures like the ACT and SAT college entrance tests and the National Assessment of Educational Progress. In those three national tests, Minnesota students have ranked consistently among the top 6 states in the nation.

In 1997, prior to the implementation of statewide standards, Minnesota students were required to take only one year of high school mathematics. Consequently, Minnesota has been near the bottom nationally in the number of high school students studying topics like algebra, geometry, and trigonometry. With the adoption of statewide standards, all students were required to take the equivalent of three years of significant mathematics. As a result, teachers who have implemented the current standards report increases in enrollment and success in such course work.

While the Profiles of Learning requirements added to the amount of significant mathematics being taught to Minnesota children, there were problems with its implementation that resulted in dissatisfied parents, educators and legislators. Much of the dissatisfaction with the Profiles came from the confusion caused by the "performance packages". For many people, the performance packages were synonymous with the standards rather than an example of how they could be assessed. Also, from its very beginning, teachers found that the scoring and record keeping took excessive time away from teaching. Regardless of one's position on the Profiles of Learning, Minnesota must address the issue of content standards. The federal "No Child Left Behind" legislation requires content standards in grades 3 through 8. So the question is not whether to create content standards for Minnesota; it is how to create them to be in compliance with federal requirements.

Minnesota teachers have worked hard over the last several years to provide the detail missing in the current mathematics content standards. Over 400 K-12 teachers, higher education faculty, and local and national experts were involved in the creation of the Minnesota K-12 Mathematics Framework. Thousands of hours, over a three-year period, were invested in the creation of this Framework. This work was guided by research and a coherent vision of K-12 mathematics.

Using research on teaching and learning, the Framework, Minnesota's existing standards, and national standards, a revision process was started in summer, 2001. This process clarified the language in the state's standards and developed grade-level expectations resulting in a draft called the Minnesota Mathematics Benchmarks. These revised standards and grade-level expectations are available and ready for review, refinement, and dissemination pending legislative approval.

These Mathematics Benchmarks would satisfy the immediate need for standards related to the "No Child Left Behind" legislation. We recommend a reasonable period of time to allow for deliberate and thoughtful integration of the work of the Academic Standards Committee with existing documents and practice. This will result in a high quality document with broad-based support from all stakeholders.

We respect the hard work contributed by the members of the Academic Standards Committee. Nevertheless, we have serious concerns with the standards proposed by

the committee. These concerns include:

- Many of the skills identified in the standards, particularly in grades K-8, are placed at a grade level where it is unrealistic to expect mastery by the vast majority of students. This is extremely important as the new standards will define the assessments used to meet the testing requirements of "No Child Left Behind".

- The proposed standards do not reflect best practices found in the current research on students' learning of mathematics.

- The basic skills defined in these documents are necessary but not sufficient for today's needs.

- The proposed standards are uneven and lack integration and coordination within and across grade levels.

- The proposed standards return us to a superficial learning of mathematics characterized by Third International Mathematics and Science Study (TIMSS) as an approach to mathematics that is a "mile-wide and an inch deep".

- The proposed standards are lists of disconnected and isolated skills that leave students unprepared for further education and eventual workplace uses of mathematics.

Minnesota citizens have already invested 175 million dollars in the development of its current standards (Star Tribune, March 16, 2003). Local school districts have invested additional millions in the implementation of these standards.

Since this document will provide direction for all Minnesota students for years to come, it is important that the product continue the good work already occurring in Minnesota classrooms. It must also provide a scaffold for mathematics learning that will be broadly supported by all stakeholders.

Having invested a significant amount of time and money in the creation of the existing Frameworks standards and corresponding Mathematics Benchmarks, the state of Minnesota would be demonstrating fiscal responsibility by utilizing those resources. In addition, Minnesota students are doing well in mathematics. It seems inadvisable to start over.

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