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Vision Statement from 1992 Conference[1]

A major reform effort is now underway in mathematics education. The goals of this reform are to enable us to educate informed citizens who are better able to function in our increasingly technological society; have better reasoning power and problem-solving skills; are aware of the importance of mathematics in our society; and are prepared for future careers which will require new and more sophisticated analytical and technical tools.

We feel that *discrete mathematics is an exciting and appropriate vehicle for working toward and achieving these goals.* It is an excellent tool for improving reasoning and problem-solving skills. It lends itself well to the evolving consensus on effective instructional strategies expressed in the *Curriculum and Evaluation Standards for School Mathematics* of the National Council of Teachers of Mathematics (NCTM). Discrete mathematics has many practical applications that are useful for solving some of the problems of our society and that are meaningful to our students. Its problems make mathematics come alive for students, and help them see the relevance of mathematics to the real world. Discrete mathematics does not have extensive prerequisites, yet poses challenges to all students. It is fun to do, is often geometrically based, and stimulates an interest in mathematics on the part of students at all levels and of all abilities.

At the same time, we feel that *discrete mathematics needs to be introduced into the K-12 curriculum for its own sake.* During the past 30 years, discrete mathematics has grown rapidly and has become a significant area of mathematics. Increasingly, discrete mathematics is the mathematics that is being used by decision-makers in business and government; by workers in fields such as telecommunications and computing that depend upon information transmission; and by those in many rapidly changing professions involving health care, biology, chemistry, automated manufacturing, transportation, etc. Increasingly, discrete mathematics is the language of a large body of science and underlies decisions that individuals will have to make

[1]An initial draft of this "vision statement" was developed during the October 1992 conference, reflecting the goals of the conference and the consensus of its participants. The statement was revised at a meeting of a designated committee of conference participants the following January.

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in their own lives, in their professions, and as citizens.

It should be stressed, however, that *we are not advocating any specific set of topics in discrete mathematics that should be taught*; discrete mathematics includes many different areas, each of which is valuable. Rather, we feel it is important that students be able to speak the language of discrete mathematics and be exposed to the ways of thinking and reasoning that are inherent in modern discrete mathematics; all students should know and be able to apply discrete mathematics concepts and skills in a variety of contexts. And it is *especially* important for teachers to become excited about their own experiences with discrete mathematics and to share that excitement with their students.