Division of Mathematics

Introduction

As a language of science, mathematics is an essential tool for the study and understanding of the laws of nature. The discipline of mathematics employs abstract mathematical objects and concepts such as numbers and space through logical analysis. Mathematics is used to quantify and abstract natural phenomena and is essential for understanding the laws of nature. As our human civilization develops and matures, the role of mathematics continues to increase in its use and importance, not only in the development of the natural sciences and engineering, but also in the study of the cultural sciences, social studies, economics, and related disciplines. In our modern society advanced mathematics is also used in many products such as computers, automated control devices, and robots that require high level self-controlled capabilities.

The research area of mathematics is divided generally into pure mathematics and applied mathematics. A broad map of pure mathematics contains three principal regions: analysis, which is based on calculus; algebra, which examines number systems and algebraic operations; and geometry and topology, which investigate geometrical objects. Applied mathematics is too diverse to be classified easily. It is based primarily on numerical analysis, differential equations, number theory, and similar fields, and it is related not only to the natural sciences, such as physics, chemistry and biology, but also to such fields as engineering, economics, and sociology. The Mathematics Department aims at continuing to maintain a productive program of high-level research in pure mathematics, which is the basis of mathematics. It is committed to educating mathematicians of the next generation. It also endeavors to contribute significantly to the advancement of research in applied mathematics and to the progress of industrial technology through its research and the teaching of applicable mathematics.