



Mathematics

An Overview...Mathematics uses mathematical theory, computational techniques, algorithms, and the latest computer technology to solve economic, scientific, engineering, physics, and business problems. There are two classes that mathematics can be divided into: *theoretical (pure) mathematics* and *applied mathematics*. Theoretical mathematicians advance mathematical knowledge by developing new principles and recognizing previously unknown relationships between existing principles in mathematics. Applied mathematicians use theories and techniques, such as mathematical modeling and computational methods, to formulate and solve practical problems in business, government, and engineering, and in the physical, life, and social sciences.

Skills:

- Background in quantitative methods
- Ability to use quantitative software
- Good oral and written communication skills
- Capacity to think logically
- Ability to work well with others
- Excellent attention to detail
- Ability to analyze problems
- Development of reasoning skills
- Understand and communicate connections

Some Professional Careers:

Actuaries	Operations Research Analyst
Astronomers	Personal Financial Advisor
Computer Programmers	Statisticians
Computer Scientist	Teacher (Elementary and Secondary)
Computer Software engineer	University Faculty
Computer Systems analyst	
Computer Systems analysts	
Database Administrators	
Financial Analyst	
Market and Survey Researchers	

Hiring Organizations:

Actuary practices	Informational Technology Departments
Applied mathematicians	Investment Firms
Census Bureaus	Market Research Companies
Colleges/Universities	National Aeronautics and Space
Elementary/Secondary Schools	State Government
Consultant Firms	Think Tanks
Federal Government	
Financial Organizations	

Professional Associations:

American Mathematical Society

201 Charles St.
Providence, RI 02940
www.ams.org

American Statistical Association

732 North Washington Street
Alexandria, VA 22314-1943
Phone: (703) 684-1221
<http://www.amstat.org/>

Association for Women in Mathematics

11240 Waples Mill Road
Suite 200
Fairfax, VA 22030
Phone: 703-934-0163
<http://sites.google.com/site/awmmath/>

Institute for Operations Research and Management Systems

7240 Parkway Drive
Suite 300
Hanover, MD 21076
Phone: 443-757-3500
<http://www.informs.org/>

Mathematical Association of America

1529 18th St. NW
Washington D.C. 20036-1358
P:(202) 387-5200
www.maa.org

National Council of Teachers of Mathematics

1906 Association Drive
Reston, VA 20191-1502
Phone: (800) 235-7566 or (703) 620-9840
<http://www.nctm.org/>