

MATHEMATICS, AN INTEGRAL PART OF
INDUSTRIAL PROCESSES AND
TECHNOLOGICAL ADVANCEMENT

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WHAT IS MATHEMATICS

- The abstract science of number, quantity, and space, either as abstract concepts (*pure mathematics*), or as applied to other disciplines such as physics and engineering (*applied mathematics*).



HISTORY

- Developed about 5,000 years ago by the Sumerians.



ROLE OF MATHEMATICAL SCIENCES IN INDUSTRY

- Business analytics – data driven decision making is the wave of the future. Business Intelligence (BI)
- Mathematical Finance – stock trading, costs and budgeting.
- Systems Biology – pharmaceutical research, Medicine
- Oil discovery and extraction
- Manufacturing – virtual prototyping, molecular dynamics, robotics
- Communications and transportation
- Computer systems and Information technology



STARTING YOUR CAREER

- Career opportunities are diverse, with businesses in every industry having a need for technologically literate employee.
 - Business computing
 - Business analyst
 - Information technology consultant
 - Information technology manager
 - Computer science
 - Computer or information technology analyst
 - Programmer
 - Software engineer
 - Systems engineer



STARTING YOUR CAREER

- Games programming
 - Applications developer
 - Games programmer
 - Software engineer
- Info tech
 - Information Technology manger
 - Information technology support technician
 - Network engineer
 - Project manager
 - Systems administrator
 - Systems analyst
 - Web developer



STARTING YOUR CAREER

- Mathematics
 - High school mathematics teacher
 - Lecturer
 - Scientific and technical services
 - Financial and insurance services
 - Public administration



FURTHERING
YOUR
CAREER

- Administration
 - Network admin
 - Systems admin
 - System developer
 - Systems security admin
 - Data Base Administrator (DBA)
 - Training



FURTHERING
YOUR
CAREER

- Information Technology
 - Chief Information officer
 - Information technology director
 - Information technology manager
 - Information technology support manager
 - Knowledge manager
 - Systems/operations manager



FURTHERING
YOUR
CAREER

- Management
 - Chief Information officer
 - Digital forensics specialist
 - Information technology manager
 - Information technology team lead
 - Information technology quality manager
 - Project manager
 - Systems Admin manager



THANK
YOU