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
Career opportunities are diverse, with businesses in every industry having a need for technologically literate employees.

- 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 programing
  - 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