

Maths teaches you to use numbers, symbols and formulae to solve problems. It equips you for fields such as Engineering and Technology and enables logical, analytical thinking in all careers.

#### Biostatistician

Working with other scientists, you will carry out statistical analysis of biological data in fields such as medical research. The UK is a world-leader in areas of clinical research including heart disease, immunology, and the nervous system. It is estimated that 133,000 new life science jobs will be created in the UK by 2030 with demand for maths and statistics growing. You'll work with large amounts of data, calculating the risks and effectiveness of different treatments.

#### Cryptocurrency Trader

Cryptocurrency traders buy and sell increasingly popular cryptocurrencies like Bitcoin and Ripple to make a profit. In 2018, cryptocurrencies were used to make alternative finance transactions worth \$304.5 billion across the world. There are an estimated 35 million Cryptocurrency traders around the globe, with this number continuing to grow. You'll take a logical approach to evaluating markets to predict how cryptocurrencies will change in value.

#### How will the most popular industries for Maths graduates change?

**Business** - Hard maths skills are crucial for business analysts, a role which is growing quickly.

**Information Technology** - Computer programmers use number systems and creative problem solving.

**Education** - Currently, only half of maths teaching hours are taught by those with a relevant degree.



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# MATHEMATICS

## 5 work skills that Maths will give you:



### Numeracy

Numeracy means understanding and being able to work with numbers. It's fundamental to the study of Maths. But it's also about how you use numbers in everyday life, whether that's to work out how long you have to wait until the next bus arrives or how much change you should get in a shop.



### Statistical Sampling

You will learn about different sampling techniques to gather data and when you should use them. You'll also understand the various ways statistics can be presented, including in scatter diagrams and other visual forms.



### Data Analysis

You'll use diagrams, graphs, tables and charts to explore a dataset and look for trends or outliers within that data. Skills like calculating averages and standard deviation will help you interpret the numbers in front of you.



### Presentation

It isn't enough to simply understand how to use Maths. You need to be able to explain your findings clearly, sometimes to people who aren't as experienced as you. You'll need to present ideas, numbers, equations and diagrams, and show all the steps you took to get to your conclusion.



### Problem Solving Skills

In Maths, problem solving needs to be approached in a logical way. You have to identify the problem, gather the information you need and then find the right way to process and represent that information. It isn't all about numbers and figures, sometimes you'll use letters for more abstract calculations.

## Where can Maths take you?

### Careers using High Level Maths:

- Architect
- Economist
- Engineers (all)
- Meteorologist
- Operational Researcher
- Physicist
- Quantity Surveyor
- Research Scientist (maths)
- Statistician
- Systems Analyst
- Teacher
- Sports Data Analyst

### Good skills in Numeracy required by:

- Air Cabin Crew
- Call Centre Operator
- CNC Machinist
- Construction Crafts person
- Electrician
- Engineering Crafts person
- Restaurant Manager
- Sales Assistant
- Stock Control Assistant
- Teaching Assistant
- Fund Manager
- Payroll Clerk
- Pensions Adviser
- Retail Buyer
- Sales Representative
- Stockbroker
- Stock Market Trader
- Supply Chain Manager

### Good skills in Numeracy required by:

- Accountant
- Accounting Technician
- Actuary
- Auditor
- Bank Manager
- Bookkeeper
- Banking Customer Adviser
- Bookkeeper
- Business Development Manager
- Credit Controller
- Financial Adviser

## Future of Job Facts:



### Accountancy

Over **840,000** people work in the UK accountancy industry There are over 164,000 accountancy students in the UK and Ireland, with numbers growing.



### Engineering

The proportion of young engineers has dropped over the last decade. This means there will be high demand for younger workers in the coming years.



### Investment

Maths can help you understand the importance of research and how to spot the important information. Meticulous research is a big part of working in the investment management industry.



### Consultancy

In the future, consultants with skills and knowledge in IT and Technology, Data Analysis, Digital Marketing and Cyber Security will be in demand.



### Banking & Finance

Technology is becoming increasingly important across this industry - but **62%** of employers say the digital skills gap is widening, more than any other industry.



### Insurance & Pensions

The UK insurance industry employed nearly **280,000** people in 2016 - that's almost a third of all financial services jobs.