

Applications of Maths

N3 Applications of Maths

This course will help you to acquire mathematical and numerical skills and apply them in a variety of real-life situations. You will develop thinking skills and gain experience in making informed decisions.

The course has three compulsory units:

Applications of Mathematics: Manage Money and Data (6 SCQF credit points)

In this unit you will:

- learn how to manage money and data in real-life situations
- build on your mathematical and numerical skills to learn about the kinds of things that affect income and expenditure, budgeting and saving
- learn how to organise, present and interpret data.

Applications of Mathematics: Shape, Space and Measures (6 SCQF credit points)

In this unit you will:

- apply your skills, knowledge and understanding of shape, space and measures in real-life situations
- build on your mathematical and numerical skills by using measures and elementary geometry to tackle real-life situations.

Numeracy (6 SCQF credit points)

In this unit you will:

- develop your numerical and information handling skills to solve simple, real-life problems involving number, money, time and measurement
- learn how to use your knowledge of number processes, information handling and probability to make informed decisions.

You must pass all the units to gain the qualification.

N4 Applications of Maths

This course will help you to acquire mathematical and numerical skills and apply them in a variety of real-life situations. You will develop thinking skills and gain experience in making informed decisions.

The course has three compulsory units, plus an added value unit that assesses your practical skills.

Applications of Mathematics: Managing Finance and Statistics (6 SCQF credit points)

In this unit you will:

- learn how to use reasoning and financial skills to manage finance and statistics in real-life situations
- learn how to budget, and how to organise and present data.

Applications of Mathematics: Geometry and Measures (6 SCQF credit points)

In this unit you will:

- learn how to apply reasoning skills and geometric skills in real-life situations
- learn how to use mathematical reasoning to interpret and use shape, space and measures.

Numeracy (6 SCQF credit points)

In this unit you will:

- develop your numerical and information-handling skills to solve real-life problems involving number, money, time and measurement
- learn how to interpret graphical data and use probability to solve real-life problems involving money, time and measurement.

Added Value Unit: Applications of Mathematics Test (6 SCQF credit points)

In this unit you will:

- complete a test that assesses your ability to organise and plan aspects of personal life, the workplace and the wider world using mathematical ideas and strategies
- use reasoning to apply and integrate financial, measurement, geometric and statistical skills in real-life contexts
- be assessed on your ability to use your numerical skills without the aid of a calculator.

You must pass all the units including the test to gain the qualification.

National 5 Applications of Maths

Through real-life contexts, you will learn how to apply mathematical operational skills that are directly relevant to life and work. You will develop your mathematical reasoning skills, your creativity, and your ability to draw conclusions and make and justify decisions.

The course comprises six areas of study.

Numeracy skills

You will:

- select and use appropriate numerical notation and units
- select and carry out calculations
- record measurements using a scale on an instrument
- interpret measurements and the results of calculations to make decisions
- justify decisions by using the results of measurements and calculations.

Financial Skills

You will:

- analyse a financial position using budget information
- analyse and interpret factors affecting income
- determine the best deal (comparing at least 3 products)
- convert between several currencies
- investigate the impact of interest rates on savings and borrowing.

Statistical skills

You will:

- use a combination of statistics to investigate risk and its impact on life
- use a combination of statistical information presented in different diagrams
- use statistics to analyse and compare data sets
- draw a line of best fit from given data.

Measurement skills

You will:

- calculate a quantity based on two related pieces of information
- construct a scale drawing
- plan a navigation course
- carry out efficient container packing

- use precedence tables to plan tasks
- solve a problem involving time management
- consider the effects of tolerance.

Geometric skills

You will:

- investigate a situation involving gradient
- solve a problem involving a composite shape
- solve a problem involving the volume of a composite solid
- use Pythagoras' theorem.

Geographical data and probability skills

You will:

- extract and interpret data from different graphical forms
- make and justify decisions using evidence from the interpretation of data
- make and justify decisions based on probability.

Course Assessment

The course assessment has two components totalling 90 marks:

- Component 1: question paper 1 (non calculator) – worth 35 marks
- Component 2: question paper 2 – worth 55 marks.

The question papers will be set and marked externally by Qualifications Scotland (QS).

The grade awarded is based on the total marks achieved across all course assessment components.

The course assessment is graded A–D.

Higher Applications of Maths

The Higher Applications of Mathematics course develops, deepens and extends the operational and reasoning skills necessary for solving problems. Through real-life contexts, you acquire and apply mathematical and statistical skills directly relevant to life and work, and learn about how mathematics affects the world you live in.

The course comprises **four** areas of study.

Mathematical Modelling

You will:

- understand and apply the process of mathematical modelling to evaluate, analyse and interpret mathematical models
- use software effectively in calculations.

Statistics and probability

You will:

- apply statistical skills to basic probability
- apply statistical literacy skills to data
- apply statistical skills to correlation and linear regression
- apply statistical skills to data analysis, interpretation and communication.

Finance

You will:

- apply mathematical skills to calculating present and future values of monetary payments
- apply mathematical skills to solving problems related to personal financial products and transactions and analyse the results

- apply personal financial planning skills.

Planning and decision making

You will:

- understand and apply project planning and decision making.

Course Assessment

The course assessment has **two** components **totalling 110 marks**:

- Component 1: question paper – worth 65 marks
- Component 2: project – worth 30 marks.

The question papers will be set and marked externally by the Scottish Qualifications Authority (SQA).

The grade awarded is based on the total marks achieved across all course assessment components.

The course assessment is graded A–D.