

# AQA Maths Higher GCSE (Modular) - Contents of Module 3

This is a list of all the topics that you need to know for Module 5 Higher level. An idea of the grade level is given in brackets

'Mm' after a topic indicates a direct link to that topic on the Mymaths.co.uk website. You will need to login to use the Mymaths lessons. UCC students can get login details from their teacher.

## Integers

- Find lowest common multiple (C/B) [Mm](#) [Mm](#)
- Find highest common factor (C/B) [Mm](#) [Mm](#)
- Recognise prime numbers (C) [Mm](#)
- Write a number as the product of prime factors (C) [Mm](#)
- Find the reciprocal of a number (C)

## Rounding

- Estimate answers to division calculations (D) [Mm](#) [Mm](#)
- Estimate answers to division calculations with numbers less than 1 (C) [Mm](#) [Mm](#)
- Round to significant figures (B) [Mm](#)
- Find minimum & maximum values (C) [Mm](#) [Mm](#)

## Decimals

- Multiply two decimals such as  $2.4 \times 0.7$  (D) [Mm](#)
- Divide a number by a decimal such as  $1 \div 0.2$  and 2.8 divided by 0.07 (C)
- Convert decimals to fractions and fractions to decimals (D) [Mm](#) [Mm](#) [Mm](#)
- Convert recurring decimals to fractions and fractions to recurring decimals (B) [Mm](#) [Mm](#)
- Identify recurring and terminating decimals (B)

## Fractions

- Do subtraction calculations with simple fractions (D) [Mm](#)
- Do calculations with mixed numbers (C) [Mm](#)
- Do division calculations with simple fractions (C) [Mm](#)

## Surds

- Simplify surds (A\*) [Mm](#)
- Rationalise the denominator of a surd (A) [Mm](#)

## Indices & Standard Form

- Understand and use the terms *square*, *positive & negative*, *square root*, *cube & cube root* (D)
- Know the square numbers up to  $15^2$  (D) [Mm](#) [Mm](#)
- Know the square roots up to  $\sqrt{225}$  (D) [Mm](#)
- Know the cubes of 2,3,4,5 and 10 (D) [Mm](#)
- Use index notation and index laws for positive and negative powers (C) [Mm](#)
- Use index notation and index laws for fractional powers such as  $16^{1/4}$  (A) [Mm](#)
- Use index notation and index laws for fractional powers such as  $16^{3/4}$  (A\*) [Mm](#)
- Use standard index form with and without a calculator (C) [Mm](#)
- Convert between ordinary numbers and standard form (B) [Mm](#) [Mm](#)

## Percentages

- Increase or decrease a quantity by a given percentage (D) [Mm](#)
- Understand how to use successive percentages (B) [Mm](#)
- Work out compound interest (B) [Mm](#)
- Write one quantity as a percentage of another (D)
- Work out a percentage increase or decrease (C) [Mm](#)
- Work out reverse percentage problems (B) [Mm](#)

## Ratio & Proportion

- Solve simple ratio and proportion problems, such as finding the ratio of teachers to students in a school (D) [Mm](#)
- Solve more complex ratio and proportion problems, such as sharing out money between two groups in the ratio of their numbers (C) [Mm](#)
- Solve ratio and proportion problems using the unitary method (C) [Mm](#)
- Calculate proportional changes using a multiplier (B) [Mm](#)
- Solve direct and inverse proportion problems (A) [Mm](#)
- Interpret the graphs of direct and inverse proportion relationships (A) [Mm](#)

## Use of symbols

- Multiply out expressions with brackets (D) [Mm](#)
- Expand (and simplify) harder expressions (C) [Mm](#)
- Expand (and simplify) quadratic expressions (B) [Mm](#)
- Factorise expressions (D) [Mm](#)
- Factorise quadratic expressions (B) [Mm](#)
- Simplify rational expressions (B)
- Factorise harder quadratic expressions (A) [Mm](#)
- Simplify harder rational expressions (A\*)

## Quadratic graphs

- Draw graphs of simple quadratic functions (D) [Mm](#)
- Draw graphs of harder quadratic functions (C) [Mm](#)
- Find the points of intersection of quadratic graphs with lines (C) [Mm](#)
- Use graphs to find the approximate solutions of quadratic equations (C) [Mm](#)

- Use the points of intersection of a quadratic graphs with lines to solve equations and simplify the answer (A) [Mm](#)