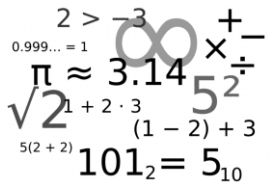
Your Shavington Mathematics Journey

All pupils will work their way through a strategic sequence of lessons each academic year and these can be seen on the following pages.

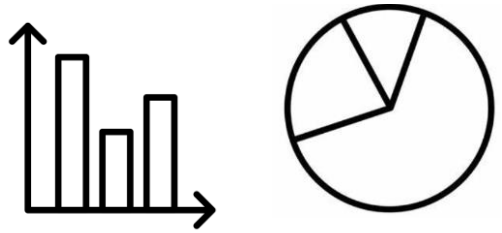
This ensures pupils can secure, develop and deepen their understanding of Mathematics, in order to be capable mathematicians post 16, and be able to apply their skills in the real world.

All learning journeys will be adapted to suit the needs of learners and may need to be altered slightly as academic years progress. Any changes to sequencing will be communicated to classes by teaching staff and via Microsoft Teams.

Year 7 Overview

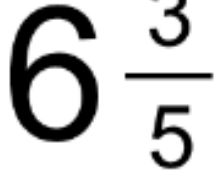


Types of Number – Factors Multiples, primes and Negatives

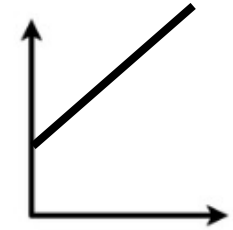


Statistics – Common graphs, characteristics and how to draw them

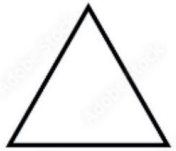
Algebra – Introduction and how to write



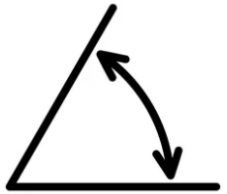
Number – Fractions and Percentages



Algebra – Sequences and Straight Line graphs

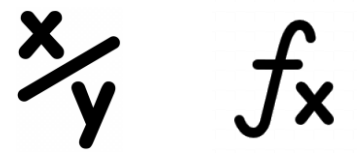


Geometry – Area and Volume



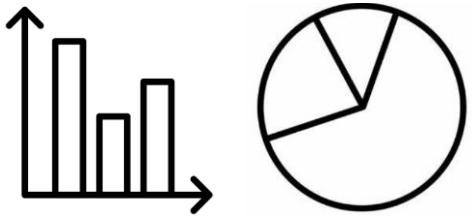
Geometry – Angles and Construction

Year 8 Overview

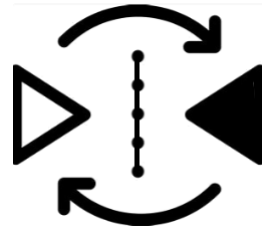


Algebra – Multiplying to simplify, expanding and factorising

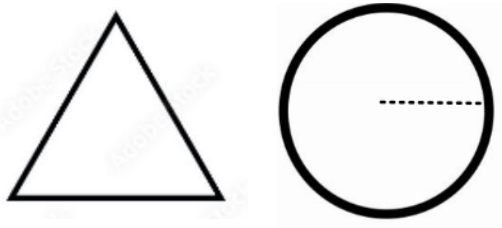
Ratio and Proportion – Introduction to Ratio



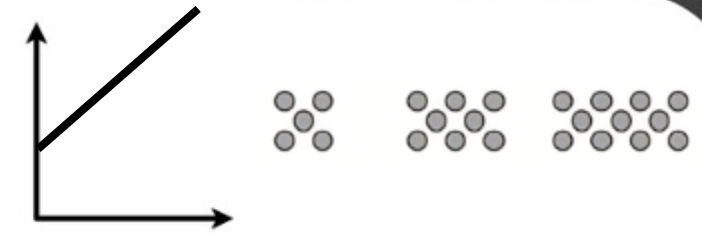
Statistics – Types of data, averages and range



Geometry – Drawing Transformations



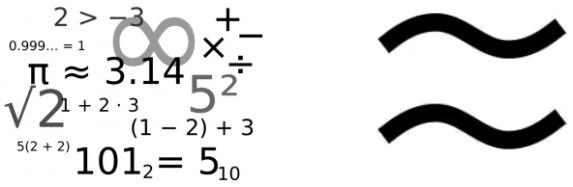
Geometry – Area and Circles



Algebra – solving equations and inequalities, sequences and linear graphs

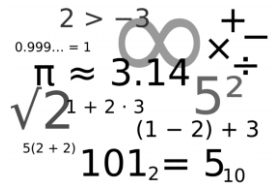
Geometry –Volume

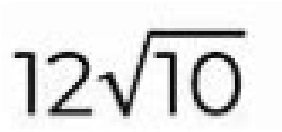
Ratio and Proportion – Introduction to Probability

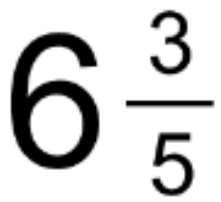


Number – BIDMAS, rounding, estimating, HCF and LCM

Year 9 Overview

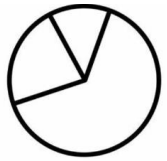




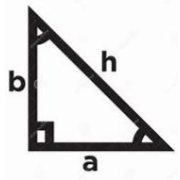


Number – Squares, cubes and roots. Decimals and Standard Form, Surds and fractions

Ratio and Proportion – n:1 and 1:n and calculating with ratios

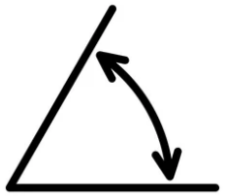


Statistics – scatter graphs, pie charts and averages from grouped data

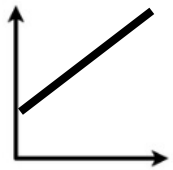


Geometry – Pythagoras and Trigonometry

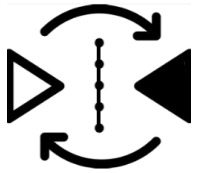
Algebra – Solving Equations, Substitution and expand/factorise quadratics



Geometry Angles in parallel lines and congruence



Ratio and Proportion – conversions, graphs and S/D/T



Geometry – Describing Transformations and Volume of Prisms

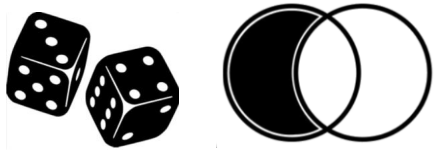
Year 10 - The start of Key Stage 4

GCSE Mathematics remains a two tier subject. All pupils will either sit:
Foundation Tier; Grades 1 – 5 accessible
Higher Tier; Grades 3 – 9 accessible

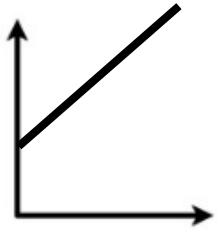
Year 9 is a key year where coverage of core, high frequency topics that occur on both tiers of GCSE Mathematics are covered by all pupils. At the end of year 9 pupils are streamed into groups with peers of similar ability using a variety of evidence. Foundation and higher tiers groups are streamed to allow all pupils to be stretched and challenged, in order to achieve and potentially exceed their projected GCSE grade.

In Year 10 the majority of the year group will be taught higher tier content, whilst still revisiting foundation core skills as they move through the sequence of the curriculum, and through assessment.

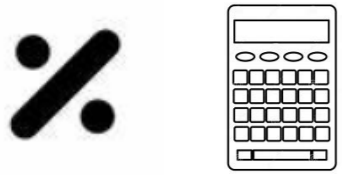
Year 10 Foundation Overview



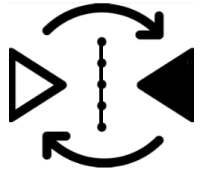
Ratio and Proportion – Probability; sample space, venn and tree diagrams



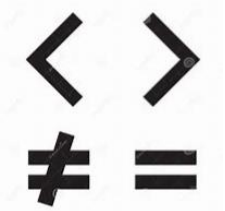
Algebra – co-ordinates, linear and real life graphs

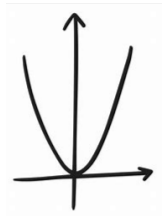


Ratio and Proportion – Percentages using a calculator

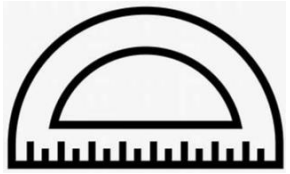


Geometry – 3D shapes, Scale Drawing, Loci and Constructions.



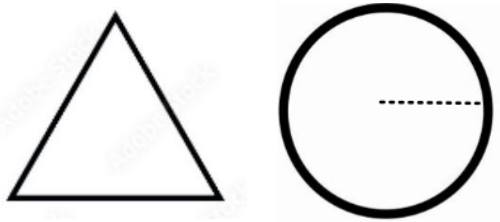


Algebra – Expand and Factorise, Inequalities and Plotting quadratic graphs



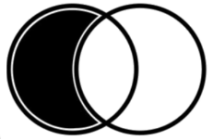
Geometry – Bearings and Pythagoras

Ratio and Proportion – Writing and applying ratio and proportion, problem solving and compound measures

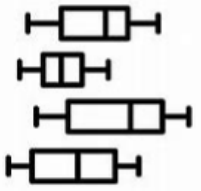
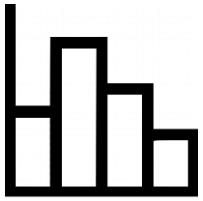


Geometry – Area, compound shapes, circles and surface area

Year 10 Higher Overview

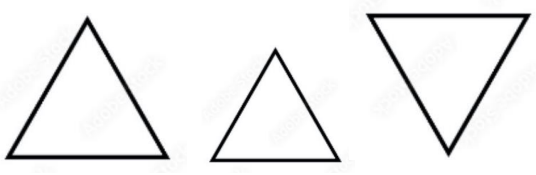



Ratio and Proportion – Conditional probability, tree and venn diagrams

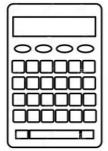



Statistics – Sampling, cumulative frequency, box plots and histograms

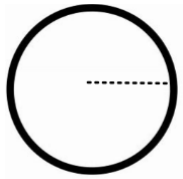

Algebra – Solving quadratics and simultaneous equations

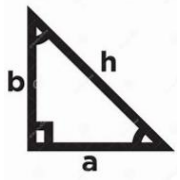


Geometry – Congruence and similarity

Ratio and Proportion – Percentages using a calculator, growth and decay, compound measures. Direct and inverse proportion





Geometry – Circle theorems, bearings, pythagoras, trigonometry, loci and constructions, circles, arcs and sectors

Year 11 - The end of Key Stage 4

Year 10 gives us the opportunity to asses pupils ability within GCESE Mathematics. Pupils have been exposed to high frequency exam level content for a complete year, and had time to build on the basic GCSE exam content taught in Year 9.

Year 11 gives us the opportunity to narrow the streamed groups further, to ensure all pupils are stretched and challenged. There are 3 tiers of Scheme of Work available in Year 11, to ensure staff can create a bespoke experience for pupils, in order to support them to achieve and potentially exceed their projected GCSE grade.

Pupils will sit mock exams in Spring term of Year 11 on one of the following tiers:

Foundation Tier; Grades 1 – 5 accessible
Higher Tier; Grades 3 – 9 accessible

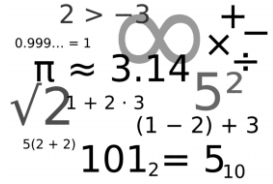
After the mock exams, tiers will be evaluated and any changes will be in discussion with parents to ensure pupils can achieve the best grade possible.

Year 11 Foundation Overview

$6\frac{3}{5}$

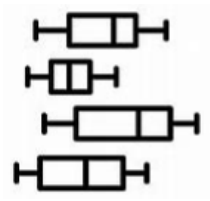
Number – Fractions; simplifying calculating, converting

Ratio and Proportion – simplifying, calculating and proportion problems

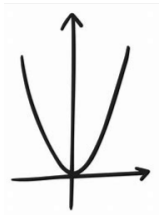


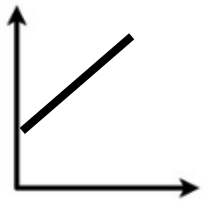
Number, Primes, HCF, LCM, index laws,

Algebra – Substitution, Formulae, expand and factorise



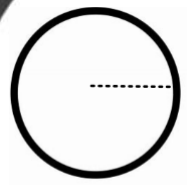
Statistics – Cumulative Frequency and Box Plots

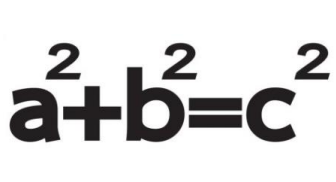


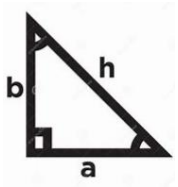


MOCKS

Algebra – plotting graphs and identifying key points, sequences, expand and factorise



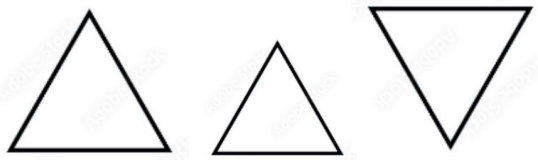




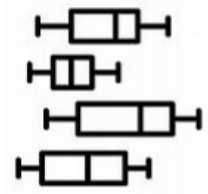
Geometry – Circles, Pythagoras and Trigonometry

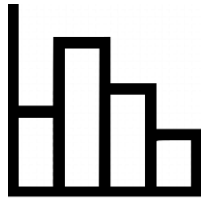
GCSE Exams

Year 11 Higher Overview

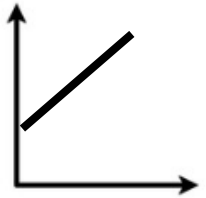


Geometry – similar shapes and scale factors in 2D and 3D

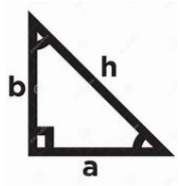




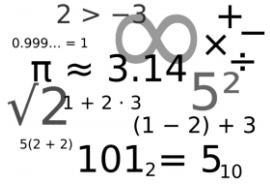
Statistics – Cumulative frequency, box plots and histograms



Algebra – Linear graphs, sequences with quadratic and formulae



Geometry – Pythagoras, Trigonometry, congruence and transformations



Number – Index laws, surds, recurring decimals, bounds

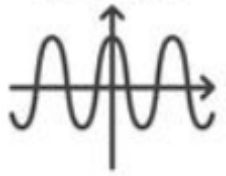
MOCKS

Geometry – Loci and Construction

Ratio and Proportion – Problem solving

GCSE Exams

Year 11 Higher Plus Overview

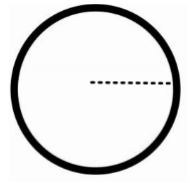


Geometry – Trigonometric graphs and transformations of graphs

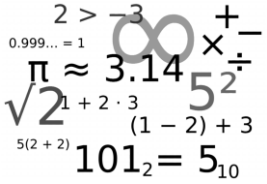
Algebra - Iteration

Geometry – Cylinders, cones, spheres and equation of a circle

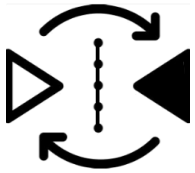
Algebra – Functions



Geometry – Circle theorems

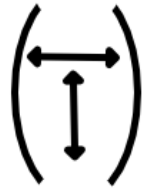


Number – Bounds and error Intervals



Geometry – Transformations and Loci

Algebra – Proof



Geometry – Vectors

MOCKS

Algebra – Algebraic Fractions

GCSE Exams