

## Amended Curriculum 2021

The mathematics faculty have been in a privileged position since October 2020 to be able to blend face to face teaching with remote learning via google meet when our students needed to self isolate. Since the lockdown of 2021, the faculty has proceeded to teach live lessons to all students. Subsequently our students' learning and progress has not been negatively impacted by the school closures and has remained continuous and progressive throughout this time and we thank you for your support in enabling this to happen.

The curriculum required some rearranging during this time as some topics lend themselves well to remote live teaching than others. Consequently these areas of study will be reintegrated back into the scheme of learning for this academic year.

## YEAR 7

Spring 2	Summer 1
<b>Ratio and proportion</b>	<b>8 Lines and angles</b>
Use direct proportion in simple contexts.	Describe and label lines, angles and triangles.
Solve simple problems involving direct proportion.	Identify angle, side and symmetry properties of triangles.
Use the unitary method to solve simple word problems involving direct proportion.	Use a protractor to measure and draw angles.
Use ratio notation.	Estimate the size of angles.
Reduce a ratio to its simplest form.	Solve problems involving angles.
Reduce a three-part ratio to its simplest form by cancelling.	Use a ruler and protractor to draw triangles accurately.
Divide a quantity into two parts in a ratio given in words.	Solve problems involving angles and triangles.
Divide a quantity into two parts in a given ratio.	Use the rule for angles on a straight line, angles around a point and vertically opposite angles.
Solve word problems involving ratio.	Solve problems involving angles.
Use ratios and measures.	Use the rule for the sum of angles in a triangle.
Use fractions to describe and compare proportions.	Calculate interior and exterior angles.
Understand and use the relationship between ratio and proportion.	Solve angle problems involving triangles.
Use percentages to describe proportions.	Identify and name types of quadrilaterals.
Use percentages to compare simple proportions.	Use the rule for the sum of angles in a quadrilateral.
Understand and use the relationship between ratio and proportion.	Solve angle problems involving quadrilaterals.

## Year 8

Spring 2	Summer 1
<b>Lines and angles</b>	<b>2 Area and volume</b>
Matching quadrilaterals to their descriptions.	Derive and use the formula for the area of a triangle.

Using known facts about quadrilaterals to solve problems.	Find areas of compound shapes.
Using alternate angles to find unknown angles.	Calculate areas of parallelograms and trapezia.
Using reasoning to complete mathematical proofs.	Calculate the volume of cubes and cuboids.
Solving geometrical problems using side and angle properties of triangles and quadrilaterals.	Sketch nets of 3D solids.
Identifying corresponding angles.	Calculate the surface area of cubes and cuboids.
Solving problems using properties of angles in parallel and intersecting lines.	Calculate the volume of cubes and cuboids.
Calculating the sum of the interior and exterior angles of a polygon.	Calculate the surface area of cubes and cuboids.
Calculating the interior and exterior angles of a polygon.	
Finding unknown angles by forming and solving equations.	
Solving geometric problems showing reasoning.	

## Year 9 Higher Tier - Mr Haigh's class, Mr Lister's class and Ms Jan's class

<b>Spring 2</b>
6.6 Quadratic graphs
Draw quadratic graphs.
Solve quadratic equations using graphs.
Identify the line of symmetry of a quadratic graph.
9.1 Solving quadratic equations 1
Find the roots of quadratic functions.
Rearrange and solve simple quadratic equations.

<b>Summer 1</b>
Calculate average speed from a distance–time graph.
Understand velocity–time graphs.
Find acceleration and distance from velocity–time graphs.

## Year 9 Foundation Tier - Mrs Turner's class and Miss Holdsworth's class

<b>Spring 2</b>
6.6 Quadratic graphs
Draw quadratic graphs.
Solve quadratic equations using graphs.
Identify the line of symmetry of a quadratic graph.

<b>Summer 1</b>
<b>6 Angles</b>
Identify congruent shapes.
Understand and use the angle properties of parallel lines.
Find missing angles using corresponding and alternate angles.
Solve angle problems in triangles.
Understand angle proofs about triangles.
Calculate the interior and exterior angles of regular polygons.
Calculate the interior and exterior angles of polygons.
Solve angle problems using equations.
Solve geometrical problems showing reasoning.

**Year 10 Higher Tier - Ms Jan's class, Mr Haigh's class**

<b>Spring 2</b>
<b>10 Probability</b>
Draw and use frequency trees.
Calculate probabilities of repeated events.
Draw and use probability tree diagrams.
Decide if two events are independent.
Draw and use tree diagrams to calculate conditional probability.
Draw and use tree diagrams without replacement.
Use two-way tables to calculate conditional probability.
Use Venn diagrams to calculate conditional probability.
Use set notation.

<b>Summer 1</b>
<b>16 Circle theorems</b>
Solve problems involving angles, triangles and circles.
Understand and use facts about chords and their distance from the centre of a circle.
Solve problems involving chords and radii.
Understand and use facts about tangents at a point and from a point.
Give reasons for angle and length calculations involving tangents.

Understand, prove and use facts about angles subtended at the centre and the circumference of circles.
Understand, prove and use facts about the angle in a semicircle being a right angle.
Find missing angles using these theorems and give reasons for answers.
Understand, prove and use facts about angles subtended at the circumference of a circle.
Understand, prove and use facts about cyclic quadrilaterals.
Recognise the alternate segment theorem.
Solve angle problems using circle theorems.

## Year 10 Foundation Tier - Mrs Turner's class, Mrs Lister's class and Miss Holdsworth's class

<b>Spring 2</b>
<b>14.1 Percentages</b>
Calculate a percentage profit or loss.
Express a given number as a percentage of another in more complex situations.
Find the original amount given the final amount after a percentage increase or decrease
Find an amount after repeated percentage change.
Solve growth and decay problems.

<b>Summer 1</b>
<b>16 Quadratic equations and graphs</b>
Multiply double brackets.
Recognise quadratic expressions.
Square single brackets.
Plot graphs of quadratic functions.
Recognise a quadratic function.
Use quadratic graphs to solve problems.
Solve quadratic equations $ax^2 + bx + c = 0$ using a graph.
Solve quadratic equations $ax^2 + bx + c = k$

**Year 11 Higher and Foundation Tier** - Students will be continuously undertaking in class assessments, which will be a combination of diagnostic, formative and summative assessments to provide both the student and class teacher information about their academic progress as well as diagnostically review areas of misconceptions to be addressed to enable our students to progressively improve their overall performance.