MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Year 10 Middle	**Substantive Knowledge**	**Disciplinary Knowledge**	**Assessment**
Half-term 1	**Algebra (Graphs)** • Find the gradient of a line. • Identify and interpret the gradient from an equation. • Understand what m and c represent in y = mx + c. • Find the equations of straight-line graphs. • Sketch graphs given the values of m and c. • Use distance–time graphs to solve problems. • Draw distance–time graphs. • Interpret rate of change graphs. • Draw and interpret a range of graphs. **Transformations** • Transform shapes using more than one transformation. • Describe combined transformations of shapes on a grid. • Describe reflections on a coordinate grid. • Describe a rotation. • Find the centre of enlargement.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Formative Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Half-term 2	**Ratio and Proportion** • Compare ratios using n:1 and 1:n. • Use ratios involving decimals. • Share amounts using a ratio. • Combine 2 ratios together. • Use the unitary method to solve proportion problems. • Solve proportion problems in words. • Work out which product is better value for money. • Recognise and use direct proportion on a graph. • Understand the link between the unit ratio and the gradient. • Recognise different types of proportion. **Right Angled Triangles** • Solve problems using Pythagoras' theorem. • Use trigonometry to solve problems. • Find the height of Isosceles Triangles (Pythagoras or Trig decision making) • Find areas and perimeter of triangles by using other skills first to give you the information you need. • Use exact trig values to solve problems **Assessment Window 1**	• Application of substantive knowledge within different scenarios • Justification or making corrections tasks • Problem solving tasks • Making connections between questions and concepts • Chains of reasoning	❑ Formative Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

MATHEMATICS KS4
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Half-term 3	**Probability** • Use Venn diagrams to work out probabilities. • Understand the language of sets and Venn diagrams. • Use frequency trees and tree diagrams. • Work out probabilities using tree diagrams. • Understand when events are not independent. • Solve probability problems involving events that are not independent. **Multiplication Theory** • Express a given number as a percentage of another in more complex situations. • Find an amount after repeated percentage change. • Solve growth and decay problems. • Solve problems involving compound measures. • Calculate with speed. • Convert between metric speed measures. • Use ratio and proportion in measures and conversions. • Use inverse proportions.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ MID-TERM EXAM ❑ Formative Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Half-term 4	**Multiplication Theory (Cont)** • As above **Constructions, Loci and Bearings** • Understand and draw plans and elevations of 3D shapes. • Sketch 3D shapes based on their plans and elevations. • Identify congruent triangles. • Construct triangles and bisectors using protectors and a pair of compasses. • Use scales on maps and diagrams to work out lengths and distances. • Know when to use exact measurements and • Identify regions bounded by loci to solve practical problems. • Solve problems involving bearings and scale diagrams.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Formative Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes
Half-term 5	**Quadratic Equations and Graphs** • 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 $ax^2 + bx + c = k$ using a graph. **Perimeter, Area and Volume**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Formative Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	• Work out areas of semicircles and quarter circle and perimeters. • Solve problems involving sectors of circles. • Solve problems involving areas and perimeters of 2D shapes. • Work out the volume and surface area of cylinders. • Work out the volume/SA of a pyramid. • Work out the volume/SA of a cone. Work out the volume/SA of a sphere.		
Half-term 6	**Assessment Window 2** **Perimeter, Area and Volume (continue unit)** **Review, Recap and Enrich based on gaps within the class.**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ END OF YEAR EXAM ❑ Formative Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Year 10 Upper	**Substantive Knowledge**	**Disciplinary Knowledge**	**Assessment**
Half-term 1	**Algebra (Quadratic and Simultaneous Equations)** • Quadratic expressions and equations. • Find the roots of quadratic functions. • Rearrange and solve simple quadratic equations. • Use the quadratic formula to solve a quadratic equation. • Solve quadratic equations by completing the square. • Solve simple simultaneous equations. • Solve simultaneous equations for real-life situations. • Solve linear simultaneous equations where both equations are multiplied. • Solve simultaneous equations with one quadratic equation. **Probability** • Draw and use frequency trees and two-way tables. • Calculate probabilities of repeated events or more than one event. • 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.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	• Use two-way tables to calculate conditional probability. • Use Venn diagrams to calculate conditional probability. • Use set notation.		
Half-term 2	**Multiplication Theory (Algebraic Proportion)** • Define proportional graphs. • Use proportion notation. • Use a standard method to solve algebraic direct and indirect proportion. • Know real life examples of direct and indirect proportion. • Match proportional equations to graphs. **Assessment Window 1** **Similarity and Congruence** • Show that two triangles are congruent. • Prove shapes are congruent. • Solve problems involving congruence. • Use the ratio of corresponding sides to work out scale factors. • Find missing lengths on similar shapes. • Use similar triangles to work out lengths in real life.	• Application of substantive knowledge within different scenarios • Justification or making corrections tasks • Problem solving tasks • Making connections between questions and concepts • Chains of reasoning	❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	• Use the link between linear scale factor and area scale factor to solve problems.		
Half-term 3	**Advanced Trigonometry (Non-Right angle and 3D)** • Understand and use upper and lower bounds in calculations involving trigonometry. • Understand how to find the sine of any angle. • Know the graph of the sine function and use it to solve equations. • Understand how to find the cosine of any angle. • Know the graph of the cosine function and use it to solve equations. • Understand how to find the tangent of any angle. • Know the graph of the tangent function and use it to solve equations. • Find the area of a triangle and a segment of a circle. • Use the sine and cosine rules to solve 2D problems. • Recognise how changes in a function affect trigonometric graphs. **Cumulative Frequency, Box Plots and Histograms**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ MID-TERM EXAM ❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	• Calculate interquartile range from a list of values. • Draw and interpret box plots. • Understand frequency density. • Draw histograms. • Interpret histograms (including estimated values). • Compare two sets of data.		
Half-term 4	**Harder Equations and Graphs** • Use a table of values to draw any linear or non-linear graph including reciprocal, exponential and circles. • Solve simultaneous equations graphically. • Find solutions of graphs or state approximations. • State inequalities to match quadratic graphs. • Recall the key features of a straight-line graph and the equation y = mx + c. • Find gradients. • Find the equation of a line between 2 points. • Link the gradients of parallel and perpendicular lines. • Find the equation of a line parallel to a line. • Find the equation of a line perpendicular to a line (also link with circles and tangents). **Circle Theorems** • Solve problems involving angles, triangles and circles.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	• 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. • Prove the alternate segment theorem.		
Half-term 5	**Changing the Subject, Algebraic Fractions, Functions and Proof** • Add and subtract algebraic fractions. • Multiply and divide algebraic fractions. • Change the subject of a formula involving fractions where all the variables are in the denominators. • Simplify algebraic fractions. • 4 operations with more complex algebraic fractions. • Solve equations that involve algebraic fractions.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	• Find composite functions. • Find inverse functions. • Prove a result using algebra.		
Half-term 6	**Assessment Window 2** **Changing the Subject, Algebraic Fractions, Functions and Proof – cont.** **Review, Recap and Enrich based on gaps within the class.**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ END OF YEAR EXAM ❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Year 10 Target 6	**Substantive Knowledge**	**Disciplinary Knowledge**	**Assessment**
Half-term 1	**Algebra (Quadratic and Simultaneous Equations)** • Quadratic expressions and equations. • Find the roots of quadratic functions. • Rearrange and solve simple quadratic equations. • Use the quadratic formula to solve a quadratic equation. • Solve quadratic equations by completing the square. • Solve simple simultaneous equations. • Solve simultaneous equations for real-life situations. • Solve linear simultaneous equations where both equations are multiplied. • Solve simultaneous equations with one quadratic equation. **Number (Estimating, Standard Form Sums, Surds, Laws of Indices)** • Calculations using the order of operations and decimals. • Estimate an answer. • Use and manipulate place value to answer questions. • Work with square and cubic numbers and find roots. • Use powers and roots with multiple variables. • Work with negative indices.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	• Work with fractional indices. • Manipulate ordinary numbers and numbers in standard form. • Calculate with numbers in standard form (Addition and Subtraction) • Understand the difference between rational and irrational numbers. • Simplify a surd. • Manipulate a surd. • Rationalise a denominator.		
Half-term 2	**Multiplication Theory** • Use ratio (Simplify, express in the form 1:n and n:1, share amounts and combine) • Define proportional graphs. • Use proportion notation. • Use a standard method to solve algebraic direct and indirect proportion. • Know real life examples of direct and indirect proportion. • Match proportional equations to graphs. • Solve problems involving compound measures. • Calculate with speed. • Convert between metric speed measures. • Use ratio and proportion in measures and conversions. • Express a given number as a percentage of another in more complex situations.	• Application of substantive knowledge within different scenarios • Justification or making corrections tasks • Problem solving tasks • Making connections between questions and concepts • Chains of reasoning	❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	• Find an amount after repeated percentage change. • Solve growth and decay problems. **Assessment Window 1**		
Half-term 3	**Transformations** • Transform shapes using more than one transformation. • Describe combined transformations of shapes on a grid. • Describe reflections on a coordinate grid. • Describe a rotation. • Find the centre of enlargement. **Cumulative Frequency, Box Plots and Histograms** • Calculate interquartile range from a list of values. • Draw and interpret box plots. • Understand frequency density. • Draw histograms. • Interpret histograms (including estimated values). • Compare two sets of data.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ MID-TERM EXAM ❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Half-term 4	**Graphs, Inequalities, Quadratics, Fractions and Sequences** • Solve basic equations and inequations. • Drawing graphs (linear and non-linear) using a table of values. • Recognising key features of different types of graphs. • Solve simultaneous equations graphically. • Manipulate quadratic expressions and equations. • Find the roots of quadratic functions. • Rearrange and solve simple quadratic equations. • Use the quadratic formula to solve a quadratic equation. • Solve quadratic equations by completing the square.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes
Half-term 5	**Similarity and Congruence** • Show that two triangles are congruent. • Prove shapes are congruent. • Solve problems involving congruence. • Use the ratio of corresponding sides to work out scale factors. • Find missing lengths on similar shapes. • Use similar triangles to work out lengths in real life. • Use the link between linear scale factor and area scale factor to solve problems.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

	Changing the Subject, Algebraic Fractions, Functions and Proof • Add and subtract algebraic fractions. • Multiply and divide algebraic fractions. • Change the subject of a formula involving fractions where all the variables are in the denominators. • Simplify algebraic fractions. • 4 operations with more complex algebraic fractions. • Solve equations that involve algebraic fractions. • Find composite functions. • Find inverse functions. • Prove a result using algebra.		
Half-term 6	**Assessment Window 2** **Changing the Subject, Algebraic Fractions, Functions and Proof – cont.** **Review, Recap and Enrich based on gaps within the class.**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ END OF YEAR EXAM ❑ Interim Assessments ❑ Homework ❑ In class Assessment for Learning activities ❑ Low Stake Quizzes

MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Year 11 Middle	**Substantive Knowledge**	**Disciplinary Knowledge**	**Assessment**
Half-term 1	**Fractions, Indices and Standard Form** • Multiply and divide mixed numbers and fractions. • To know and use the laws of indices. • Write large numbers in standard form. • Convert large numbers from standard form into ordinary numbers. • Write small numbers in standard form. • Convert numbers from standard form with negative powers of ordinary numbers. • To multiply and divide numbers in standard form. • To add and subtract numbers in standard form. **Congruence, Similarity and Vectors** • Understand similarity. • Use similarity to solve angle problems. • Find the scale factor of an enlargement.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

	• Use similarity to solve problems. • Understand the similarity of regular polygons. • Calculate perimeters of similar shapes. • Recognise congruent shapes. • Use congruence to work out unknown angles. • Add and subtract vectors. • Find the resultant of two vectors. • Subtract vectors. • Find multiples of a vector.		
Half-term 2	**Proportion and Graphs** • Draw and interpret graphs of cubic functions. • Draw and interpret graphs of y = 1/x. • Draw and interpret non-linear graphs to solve problems. • Solve simultaneous equations by drawing a graph. • Write and solve simultaneous equations. • Solve simultaneous equations algebraically. • Change the subject of a formula. • Identify expressions, equations, formulae and identities.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

	• Prove results using algebra. **Mock Exam Revision**		
Half-term 3	**Mock Exam Revision** **Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Mock Exam ❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities
Half-term 4	**Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

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Half-term 5	**Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.** **Exam Season**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities
Half-term 6	**Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.** **Exam Season**	✓ Revision	❑ Revision

MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Year 11 Upper	**Substantive Knowledge**	**Disciplinary Knowledge**	**Assessment**
Half-term 1	**Revisit of Key Algebra Topics from Years 9/10** • Solve Quadratic Equations by factorising. • Solve Quadratic Equations by completing the square. • Solve Quadratic Equations by using the quadratic formula. • Simplify Algebraic Fractions • Add and subtract algebraic fractions. • Multiply and divide algebraic fractions. • Find the nth term of a Quadratic Sequence **Vectors and Geometric Proof** • Work out the magnitude of a vector. • Calculate using vectors and represent the solutions graphically. • Calculate the resultant of two vectors. • Solve problems using vectors. • Use the resultant of two vectors to solve vector problems. • Express points as position vectors. • Prove lines are parallel. • Prove points are collinear.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

	• Solve geometric problems in two dimensions using vector methods. • Apply vector methods for simple geometric proofs.		
Half-term 2	**Proportion and Graphs** • Write and use equations to solve problems involving direct proportion. • Write and use equations to solve problems involving direct proportion. • Solve problems involving square and cubic proportionality. • Write and use equations to solve problems involving inverse proportion. • Use and recognise graphs showing inverse proportion. • Recognise graphs of exponential functions. • Sketch graphs of exponential functions. • Calculate the gradient of a tangent at a point. • Estimate the area under a non-linear graph. • Understand the relationship between translating a graph and the change in its function notation.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

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	Mock Exam Revision		
Half-term 3	**Mock Exam Revision** **Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Mock Exam ❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities
Half-term 4	**Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

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Half-term 5	**Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.** **Exam Season**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities
Half-term 6	**Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.** **Exam Season**	✓ Revision	❑ Revision

MATHEMATICS KS4
SUBJECT OVERVIEW MAP

Year 11 Target 6	**Substantive Knowledge**	**Disciplinary Knowledge**	**Assessment**
Half-term 1	**Probability** • Draw and use frequency trees and two-way tables. • Calculate probabilities of repeated events or more than one event. • 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. **Right Angled Triangles** • Solve problems using Pythagoras' theorem. • Use trigonometry to solve problems. • Find the height of Isosceles Triangles (Pythagoras or Trig decision making)	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

	• Find areas and perimeter of triangles by using other skills first to give you the information you need. • Use exact trig values to solve problems		
Half-term 2	**Circle Theorems** • 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.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

	• Understand, prove and use facts about cyclic quadrilaterals. • Prove the alternate segment theorem. **Mock Exam Revision**		
Half-term 3	**Mock Exam Revision**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Mock Exam ❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities
Half-term 4	**Advanced Trigonometry (Non-Right angle and 3D)** • Understand and use upper and lower bounds in calculations involving trigonometry. • Understand how to find the sine of any angle. • Know the graph of the sine function and use it to solve equations. • Understand how to find the cosine of any angle.	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts ✓ Chains of reasoning	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

	• Know the graph of the cosine function and use it to solve equations. • Understand how to find the tangent of any angle. • Know the graph of the tangent function and use it to solve equations. • Find the area of a triangle and a segment of a circle. • Use the sine and cosine rules to solve 2D problems. • Recognise how changes in a function affect trigonometric graphs. **Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.**		
Half-term 5	**Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.** **Exam Season**	✓ Application of substantive knowledge within different scenarios ✓ Justification or making corrections tasks ✓ Problem solving tasks ✓ Making connections between questions and concepts	❑ Weekly/Fortnightly Assessments ❑ Homework ❑ In class Assessment for Learning activities

		✓ Chains of reasoning	
Half-term 6	**Individualised SoW for each class written by each class teacher based on results of weekly assessments and mock exam.** **Exam Season**	✓ Revision	❑ Revision