Time	Topic	What students should know	Mathswatch links for revision
2	12.1 Pythagoras' theorem 1	● Understand Pythagoras' theorem. ● Calculate the length of the hypotenuse in a right-angled triangle. ● Solve problems using Pythagoras' theorem.	● 150 - Pythagoras Theorem
2	12.2 Pythagoras' theorem 2	● Calculate the length of a line segment AB. ● Calculate the length of a shorter side in a right-angled triangle.	● 150 - Pythagoras Theorem

1	12.3 Trigonometry: the sine ratio 1	● Understand and recall the sine ratio in right-angled triangles. ● Use the sine ratio to calculate the length of a side in a right-angled triangle. ● Use the sine ratio to solve problems.	● 168 - Trigonometry ● 173 - Exact Trigonometric Values
1	12.4 Trigonometry: the sine ratio 2	● Use the sine ratio to calculate an angle in a right-angled triangle. ● Use the sine ratio to solve problems.	● 168 - Trigonometry ● 173 - Exact Trigonometric Values

1	12.5 Trigonometry: the cosine ratio	● Understand and recall the cosine ratio in right-angled triangles. ● Use the cosine ratio to calculate the length of a side in a right-angled triangle. ● Use the cosine ratio to calculate an angle in a right-angled triangle. ● Use the cosine ratio to solve problems.	● 168 - Trigonometry ● 173 - Exact Trigonometric Values

1	12.6 Trigonometry: the tangent ratio	● Understand and recall the tangent ratio in right-angled triangles. ● Use the tangent ratio to calculate the length of a side in a right-angled triangle. ● Use the tangent ratio to calculate an angle in a right-angled triangle. ● Solve problems using an angle of elevation or depression.	● 168 - Trigonometry ● 173 - Exact Trigonometric Values
1	13.1 Calculating probability	● Calculate simple probabilities from equally likely events. ● Understand mutually exclusive and exhaustive outcomes.	● 14 - The Probability Scale ● 59 - Calculating Probabilities ● 60 - Mutually Exclusive Events

1	13.2 Two events	● Use two-way tables to record the outcomes from two events. ● Work out probabilities from sample space diagrams.	● 14 - The Probability Scale ● 59 - Calculating Probabilities ● 60 - Mutually Exclusive Events ● 61 - Two Way Tables
1	13.3 Experimental probability	● Find and interpret probabilities based on experimental data. ● Make predictions from experimental data.	● 14 - The Probability Scale ● 59 - Calculating Probabilities ● 60 - Mutually Exclusive Events ● 125 - Experimental Probabilities
2	13.4 Venn diagrams	● Use Venn diagrams to work out probabilities. ● Understand the language of sets and Venn diagrams.	● 14 - The Probability Scale ● 59 - Calculating Probabilities ● 60 - Mutually Exclusive Events ● 127 - Venn Diagrams ● 185 - Probability Using Venn Diagrams

2	13.5 Tree diagrams	● Use frequency trees and tree diagrams. ● Work out probabilities using tree diagrams. ● Understand independent events.	● 14 - The Probability Scale ● 59 - Calculating Probabilities ● 60 - Mutually Exclusive Events ● 57 - Frequency Trees ● 151 - Simple Tree Diagrams ● 175 - Harder Tree Diagrams
2	13.6 More tree diagrams	● Understand when events are not independent. ● Solve probability problems involving events that are not independent.	● 14 - The Probability Scale ● 59 - Calculating Probabilities ● 60 - Mutually Exclusive Events ● 57 - Frequency Trees ● 151 - Simple Tree Diagrams ● 175 - Harder Tree Diagrams

2	14.1 Percentages	● 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	● 40 - Introduction To Percentages ● 86 -Percentage Of An Amount (Calc) ● 87 - Percentage Of An Amount (Non Calc) ● 88 - Change To A Percentage (Calc) ● 89 - Change To A Percentage (Non Calc) ● 108 - Increase/Decrease By A Percentage

2	14.2 Growth and decay	● Find an amount after repeated percentage change. ● Solve growth and decay problems.	● 40 - Introduction To Percentages ● 86 -Percentage Of An Amount (Calc) ● 87 - Percentage Of An Amount (Non Calc) ● 88 - Change To A Percentage (Calc) ● 89 - Change To A Percentage (Non Calc) ● 108 - Increase/Decrease By A Percentage
2	14.3 Compound measures	● Solve problems involving compound measures.	● 142 - Compound Units

2	14.4 Distance, speed and time	● Convert between metric speed measures. ● Calculate average speed, distance and time. ● Use formulae to calculate speed and acceleration.	● 142 - Compound Units
1	15.1 3D solids	● Recognise 3D shapes and their properties. ● Describe 3D shapes using the correct mathematical words. ● Understand the 2D shapes that make up 3D objects.	●9 - Simple Geometric Definitions

1	15.2 Plans and elevations	● Identify and sketch planes of symmetry of 3D shapes. ● Understand and draw plans and elevations of 3D shapes. ● Sketch 3D shapes based on their plans and elevations.	●51 - Plans & Elevations
1	15.3 Accurate drawings 1	● Make accurate drawings of triangles using a ruler, protractor and compasses. ● Identify SSS, ASA, SAS and RHS triangles as unique from a given description. ● Identify congruent triangles	●47 - Drawing A Triangle Using A Protractor ● 166 - Congruent Triangles ● 12 - Tessellations & Congruent Shapes

Time	Topic	What students should know	Mathswatch links for revision

1	15.4 Scale drawings and maps	● Draw diagrams to scale. ● Correctly interpret scales in real-life contexts. ● Use scales on maps and diagrams to work out lengths and distances. ● Know when to use exact measurements and estimations on scale drawings and maps. ● Draw lengths and distances correctly on given scale drawings.	
1	15.5 Accurate drawings 2	● Accurately draw angles and 2D shapes using a ruler, protractor and compasses. ● Construct a polygon inside a circle. ● Recognise nets and make accurate drawings of nets of common 3D objects.	● 46 - Drawing& Measuring Angles ● 10 - Polygons ● 44 - Nets
1	15.6 Constructions	● Draw accurately using rulers and compasses. ● Bisect angles and lines using rulers and compasses.	● 145 - Bisecting An Angle ● 130 - Averages From A Table
1	15.7 Loci and regions	● Draw loci for the path of points that follow a given rule. ● Identify regions bounded by loci to solve practical problems.	● 165 - Loci
2	15.8 Bearings	● Find and use three-figure bearings. ● Use angles at parallel lines to work out bearings. ● Solve problems involving bearings and scale diagrams.	● 120 - Angles & Parallel Lines ● 124 - Bearings
2	16.1 Expanding double brackets	● Multiply double brackets. ● Recognise quadratic expressions. ● Square single brackets.	● 33 - Simplifying Addition & Subtraction ● 134 - Expanding & Simplifying Brackets
2	16.2 Plotting quadratic graphs	● Plot graphs of quadratic functions. ● Recognise a quadratic function. ● Use quadratic graphs to solve problems.	● 98 - Drawing Quadratic Graphs
2	16.3 Using quadratic graphs	● Solve quadratic equations ax2 + bx + c = 0 using a graph. ● Solve quadratic equations ax2 + bx + c = k ● Using a graph.	● 157 - Factorising & Solving Quadratics
2	16.4 Factorising quadratic expressions	● Factorise quadratic expressions.	● 157 - Factorising & Solving Quadratics
2	16.5 Solving quadratic equations algebraically	● Solve quadratic functions algebraically.	● 157 - Factorising & Solving Quadratics

Time	Topic	What students should know	Mathswatch links for revision
2	17.1 Circumference of a circle 1	● Calculate the circumference of a circle. ● Solve problems involving the circumference of a circle.	● 116 - Circle Definitions ● 118 - Circumference Of A Circle

2	17.2 Circumference of a circle 2	● Calculate the circumference and radius of a circle. ● Work out percentage error intervals.	● 116 - Circle Definitions ● 118 - Circumference Of A Circle ● 115 - Error Intervals
2	17.3 Area of a circle	● Work out the area of a circle. ● Work out the radius or diameter of a circle. ● Solve problems involving the area of a circle. ● Give answers in terms of π.	● 116 - Circle Definitions ● 117 - Area Of A Circle
2	17.4 Semicircles and sectors	● Understand and use maths language for circles and perimeters. ● Work out areas of semicircles and quarter circle and perimeters. ● Solve problems involving sectors of circles.	● 116 - Circle Definitions ● 117 - Area Of A Circle ● 118 - Circumference Of A Circle ● 167 - Sectors Of A Circle
2	17.5 Composite 2D shapes and cylinders	● Solve problems involving areas and perimeters of 2D shapes. ● Work out the volume and surface area of cylinders.	● 115 - Volume Of A Cuboid ● 119 - Volume Of A Prism ● 114 - Surface Area Of A Prism ● 53 - Area Of A Rectangle ● 54 - Area Of A Triangle ● 55 - Area Of A Parallelogram ● 52 - Area Of A Trapezium ● 52 - Perimeters
2	18.1 Multiplying and dividing fractions	● Multiply and divide mixed numbers and fractions.	● 73 - Multiply Fractions ● 74 - Dividing Fractions
2	18.2 The laws of indices	● To know and use the laws of indices.	● 131 - Index Notation ● 82 - Working With Indices ● 29 - Introduction To Powers/Indices
2	18.4 Writing small numbers in standard form	● Write small numbers in standard form. ● Convert numbers from standard form with negative powers of ordinary numbers	● 83 - Standard Form
1	18.5 Calculating with standard form	● To multiply and divide numbers in standard form. ● To add and subtract numbers in standard form.	● 83 - Standard Form
2	19.1 Similarity and enlargement	● Understand similarity. ● Use similarity to solve angle problems.	● 144 - Similar Shapes
2	19.2 More similarity	● Find the scale factor of an enlargement. ● Use similarity to solve problems.	● 144 - Similar Shapes ● 148 - Enlargements

Time	Topic	What students should know	Mathswatch links for revision
2	19.3 Using similarity	● Understand the similarity of regular polygons. ● Calculate perimeters of similar shapes.	● 144 - Similar Shapes
2	19.4 Vectors 1	● Add and subtract vectors. ● Find the resultant of two vectors.	● 174 - Introduction To Vectors ● 219 - Vectors

2	19.5 Vectors 2	● Subtract vectors. ● Find multiples of a vector.	● 174 - Introduction To Vectors ● 219 - Vectors
2	20.1 Graphs of cubic and reciprocal functions	● Draw and interpret graphs of cubic functions. ● Draw and interpret graphs of y = 1/x.	● 161 - Cubic & Reciprocal Graphs
2	20.2 Non-linear graphs	● Draw and interpret non-linear graphs to solve problems.	● 161 - Cubic & Reciprocal Graphs ● 98 - Drawing Quadratic Graphs
2	20.3 Solving simultaneous equations graphically	● Solve simultaneous equations by drawing a graph. ● Write and solve simultaneous equations.	● 162 - Simultaneous Equations Algebraically ● 150 - Simultaneous Equations Graphically
2	20.4 Solving simultaneous equations algebraically	● Solve simultaneous equations algebraically.	● 162 - Simultaneous Equations Algebraically
2	20.5 Rearranging formulae	● Change the subject of a formula.	● 101 - Subject Of A Formula Using Flowcharts

Time	Topic	What students should know	Mathswatch links for revision
Half Term	**Targetted Intervention Topics**	**Targetted Intervention Topics**	**Targetted Intervention Topics**