

Key Stage 3

Year
7

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<u>Unit 2 Number skills</u> 2.1 Mental maths 2.2 Addition and subtraction 2.3 Multiplication 2.4 Division 2.5 Place value calculations 2.6 Finance: Time and money 2.7 Negative numbers 2.8 Factors, multiples and primes 2.9 Square and triangle numbers <u>Unit 1 Analysing and displaying data</u> 1.1 Mode, median and range 1.2 Displaying data 1.3 Grouping data 1.4 Averages and comparing data 1.5 Line graphs and more bar charts 1.6 Real life graphs	<u>Unit 3 Expressions, functions and formulae</u> 3.1 Functions 3.2 Algebraic notation and terminology 3.3 Simplifying expressions 3.4 Using brackets 3.5 Writing expressions 3.5 Substituting into formulae 3.7 Using formulae 3.8 More algebra terminology <u>Unit 4 Decimals and measures</u> 4.1 Decimals and rounding 4.2 Working with decimals 4.3 Length, mass and capacity 4.4 More units 4.5 Scales 4.6 Perimeter 4.7 Area	<u>Unit 5 Fractions</u> 5.1 Comparing fractions 5.2 Simplifying fractions 5.3 Working with fractions 5.4 Fractions and decimals 5.5 Understanding percentages 5.6 Percentages of amounts <u>Unit 6 Probability</u> 6.1 The language of probability 6.2 Calculating probability 6.3 More probability calculations 6.4 Experimental probability 6.5 Expected outcomes	<u>Unit 7 Ratio and proportion</u> 7.1 Writing ratios 7.2 Using ratios 7.3 Proportions and fractions 7.4 Direct proportion 7.5 Scales and measures <u>Unit 8 Lines and angles</u> 8.1 Lines, angles and triangles 8.2 Estimating, measuring and drawing angles 8.3 Using angle facts 8.4 Angles in a triangle 8.5 Quadrilaterals	<u>Unit 9 Linear Equations</u> 9.1 Solve 1 step equations 9.2 Solve 2 step equations 9.3 Form and solve equations <u>Unit 10 Sequences and graphs</u> 10.1 Linear Sequences 10.2 Pattern sequences 10.3 Extending sequences 10.4 Position-to-term rules 10.5 Coordinates 10.6 Straight-line graphs	<u>Unit 11 Transformations</u> 11.1 Congruency and enlargements 11.2 Symmetry 11.3 Reflection 11.4 Rotation 11.5 Translations

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	<u>Unit 1 Number</u> 1.1 Calculations 1.2 Calculating with negative integers 1.3 Powers and roots 1.4 Powers, roots and brackets 1.5 Prime factor decomposition <u>Unit 2 Area and volume</u> 2.1 Area of a triangle 2.2 Area of a trapezium 2.3 Volume of cubes and cuboids 2.4 3D shapes 2.5 Surface area of cubes and cuboids	<u>Unit 3 Statistics, graphs and charts</u> 3.1 Pie charts 3.2 Using tables 3.3 Stem and leaf diagrams 3.4 Comparing data 3.5 Scatter graphs 3.6 Misleading graphs <u>Unit 4 Expressions and equations</u> 4.1 Algebraic powers 4.2 Expressions and brackets 4.3 Factorising expressions 4.4 One-step equations 4.5 Multi-step equations 4.6 The balancing method	<u>Unit 5 Real-life graphs</u> 5.1 Conversion graphs 5.2 Distance-time graphs 5.3 Line graphs 5.4 Real life graphs <u>Unit 6 Decimals and ratio</u> 6.1 Ordering decimals and rounding 6.2 Multiplying decimals 6.3 Dividing decimals 6.4 Ratio and proportion with decimals	<u>Unit 7 Lines and angles</u> 7.1 Quadrilaterals 7.2 Angles in parallel lines and proof 7.3 Geometrical problems 7.4 Exterior and interior angles 7.5 Solving geometric problems <u>Unit 8 Calculating with fractions</u> 8.1 Adding and subtracting fractions 8.2 Multiply fractions 8.3 Divide fractions & Reciprocals 8.4 Calculating with proper/improper fractions, mixed numbers and integers 8.5 Fraction and decimals 8.6 Algebraic fractions <u>Unit 9 Straight-line graphs</u> 9.1 Direct proportion on graphs 9.2 Gradients 9.3 Equations of straight lines	<u>Unit 10 Compound measure</u> 10.1 Work with speed, distance, time 10.2 Work with density, mass, volume 10.3 Work with pressure, force, area <u>Unit 11 Percentages, decimals and fractions</u> 11.1 Fractions and decimals 11.2 Equivalent proportions 11.3 Writing percentages 11.4 Percentages of amounts	<u>Unit 12 Probability</u> 12.1 Calculating probabilities 12.2 Experimental probability 12.3 Probability diagrams 12.4 Independent events <u>Unit 13 Venn diagrams and set notation</u> 13.1 Venn diagrams 13.2 Sets 13.3 Set notation

Year
9

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<u>Unit 1 Indices and standard form</u> 1.1 Indices 1.2 More indices 1.3 Calculations and estimates 1.4 Standard form 1.5 Calculations in Standard form <u>Unit 2 Expressions and formulae</u> 2.1 Substituting into expressions 2.2 Writing expressions and formulae 2.3 Using & re-arranging formulae 2.4 Rules of indices and brackets 2.5 Expanding double brackets	<u>Unit 3 Dealing with data</u> 3.1 Calculating averages 3.2 Display and analyse data <u>Unit 4 Measure</u> 4.1 Units of area & volume 4.2 Converting units <u>Unit 5 Multiplicative reasoning</u> 5.1 Enlargement 5.2 Negative and fractional scale factors 5.3 Percentage change 5.4 Rates of change	<u>Unit 6 Constructions</u> 6.1 Using scales 6.2 Basic constructions & Loci 6.3 Constructing triangles 6.4 Loci <u>Unit 7 Equations, inequalities and proportionality</u> 7.1 Solving equations 7.2 Using equations 7.3 Using and solving inequalities 7.4 Simultaneous equations	<u>Unit 8 Circles, Pythagoras and prisms</u> 8.1 Circumference of a circle 8.2 Area of a circle 8.3 Pythagoras' theorem 8.4 Prisms and cylinders 8.5 STEM: Errors and bounds <u>Unit 9 Sequences, graphs</u> 9.1 nth term of arithmetic sequences 9.2 Non-linear sequences 9.3 Using $y = mx + c$ 9.4 More straight-line graphs 9.5 Graphing rates of change	9.6 More simultaneous equations 9.7 Graphs of quadratic functions 9.8 Non-linear graphs <u>Unit 10 Probability</u> 10.1 Calculating probabilities 10.2 Experimental probability 10.3 Probability diagrams 10.4 Independent events	<u>Unit 11 Comparing shapes</u> 11.1 Congruent and similar shapes 11.2 Ratios in triangles 11.3 The tangent ratio 11.4 The sine ratio 11.5 The cosine ratio

Key Stage 4

Exam Board: Edexcel

Year
10

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<u>Foundation</u> <u>Unit 1 Number</u> 1.1 Calculations 7.2 Units and accuracy 1.2 Decimal numbers 1.3 Place value 1.4 Factors and multiples 1.5 Squares, cubes and roots 1.6 Index notation 1.7 Prime factors <u>Unit 2 Algebra</u> 2.1 Algebraic expressions 2.2 Simplifying expressions 2.3 Substitution 2.4 Formulae 2.5 Expanding brackets 2.6 Factorising 2.7 Using expressions and formulae <u>Higher</u> <u>Unit 1 Number</u> 1.2 Place value and estimating 1.3 HCF and LCM 1.4 Calculating with powers (indices) 1.5 Zero, negative and fractional indices 1.6 Powers of 10 and standard form 1.7 Surds <u>Unit 2 Algebra</u> 2.1 Algebraic indices 2.2 Expanding and factorising 2.3 Equations 2.4 Formulae 2.5 Linear sequences	<u>Foundation</u> <u>Unit 3 Graphs, tables and charts</u> 3.1 Frequency tables 3.2 Two-way tables 3.3 Representing data 3.4 Time series 3.5 Stem and leaf diagrams 3.6 Pie charts 3.7 Scatter graphs 3.8 Line of best fit <u>Unit 4 Fractions and percentages</u> 4.1 Working with fractions 4.2 Operations with fractions 4.3 Multiplying fractions 4.4 Dividing fractions 4.5 Fractions and decimals 4.6 Fractions and percentages 4.7 Calculating percentages 1 4.8 Calculating percentages 2 <u>Higher</u> <u>Unit 3 Interpreting and representing data</u> 3.1 Statistical diagrams 1 3.2 Time series 3.3 Scatter graphs 3.4 Line of best fit 3.5 Averages and range 3.6 Statistical	<u>Foundation</u> <u>Unit 5 Equations, inequalities and sequences</u> 5.1 Solving equations 1 5.2 Solving equations 2 5.3 Solving equations with brackets 5.4 Introducing inequalities 5.5 More inequalities 5.6 More formulae 5.7 Generating sequences 5.8 Using the nth term of a sequence <u>Unit 6 Angles</u> 6.1 Properties of shapes 6.2 Angles in parallel lines 6.3 Angles in triangles 6.4 Exterior and interior angles 6.5 More exterior and interior angles 6.6 Geometrical patterns <u>Higher</u> <u>Unit 5 Angles and Trigonometry</u> 5.1 Angle properties of triangles and quadrilaterals 5.2 Interior angles of a polygon 5.3 Exterior angles of a polygon 5.4 Pythagoras' theorem 1 5.5 Pythagoras' theorem 2 5.6 Trigonometry 1 5.7 Trigonometry 2 8.5 Bearings	<u>Foundation</u> <u>Unit 7 Averages and range</u> 7.1 Mean and range 7.2 Mode, median and range 7.3 Types of average 7.4 Estimating the mean 7.5 Sampling <u>Unit 8 Perimeter, area and volume 1</u> 8.1 Rectangles, parallelograms and triangles 8.2 Trapezia and changing units 8.3 Area of compound shapes 8.4 Surface area of 3D solids 8.5 Volume of prisms 8.6 More volume and surface area <u>Higher</u> <u>Unit 7 Area and volume</u> 7.1 Perimeter and area 13.1 Accuracy 7.3 Prisms 7.4 Circles 7.5 Sectors of circles 7.6 Cylinders and spheres 7.7 Pyramids and cones <u>Unit 8 Transformations and constructions</u> 8.1 3D solids 8.2 Reflection and	<u>Foundation</u> <u>Unit 9 Graphs</u> 9.1 Coordinates 9.2 Linear graphs 9.3 Gradient 9.4 $y = mx + c$ 9.5 Real-life graphs 9.6 Distance-time graphs 9.7 More real-life graphs <u>Unit 10 Transformations</u> 10.1 Translation 10.2 Reflection 10.3 Rotation 10.4 Enlargement 10.5 Describing enlargements 10.6 Combining transformations <u>Higher</u> <u>Unit 9 Equations and inequalities</u> 9.1 Solving quadratic equations 1 9.2 Solving quadratic equations 2 9.3 Completing the square 9.4 Solving simple simultaneous equations 9.5 More simultaneous equations 9.6 Solving linear and quadratic simultaneous equations 9.7 Solving linear inequalities	<u>Foundation</u> <u>Unit 11 Ratio and proportion</u> 11.1 Writing ratios 11.2 Using ratios 1 11.3 Ratios and measures 11.4 Using ratios 2 11.5 Comparing using ratios 11.6 Using proportion 11.7 Proportion and graphs 11.8 Proportion problems <u>Unit 12 Right-angled triangles</u> 12.1 Pythagoras' theorem 1 12.2 Pythagoras' theorem 2 12.3 Trigonometry: the sine ratio 1 12.4 Trigonometry: the sine ratio 2 12.5 Trigonometry: the cosine ratio 12.6 Trigonometry: the tangent ratio 12.7 Finding lengths and angles using trigonometry <u>Higher</u> <u>Unit 11 Multiplicative reasoning</u> 11.2 Compound measures 11.3 More compound measures 11.4 Ratio and proportion <u>Unit 12 Similarity and</u>



2.6 Non-linear sequences 2.7 More expanding and factorising	diagrams 2 <u>Unit 4 Fractions, ratio and percentages</u> 4.1 Fractions 4.2 Ratios 4.3 Ratio and proportion 4.4 Percentages 4.5 Fractions, decimals and percentages 11.1 Growth and decay	<u>Unit 6 Graphs</u> 6.1 Linear graphs 6.2 More linear graphs 6.3 Graphing rates of change 6.4 Real-life graphs 6.5 Line segments 6.6 Quadratic graphs 6.7 Cubic and reciprocal graphs 6.8 More graphs	rotation 8.3 Enlargement 8.4 Transformations and combinations of transformations 8.5 Scale drawings 8.6 Constructions 1 8.7 Constructions 2 8.8 Loci	<u>Unit 10 Probability</u> 10.1 Combined events 10.2 Mutually exclusive events 10.3 Experimental probability 10.4 Independent events and tree diagrams 10.5 Conditional probability 10.6 Venn diagrams and set notation 1.1 Number problems and Reasoning (product rule for counting)	<u>congruence</u> 12.1 Congruence 12.2 Geometric proof and congruence 12.3 Similarity 12.4 More similarity 12.5 Similarity in 3D solids
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Year
11

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<u>Foundation</u> <u>Unit 13 Probability</u> 13.1 Calculating probability 13.2 Two events 13.3 Experimental probability 13.4 Venn diagrams 13.5 Tree diagrams 13.6 More tree diagrams <u>Unit 14 Multiplicative reasoning</u> 14.1 Percentages 14.2 Growth and decay 14.3 Compound measures 14.4 Distance, speed and time 14.5 Direct and inverse proportion Unit 15 Constructions, loci and bearings	<u>Foundation</u> <u>Unit 16 Quadratic equations and graphs</u> 16.1 Expanding double brackets 16.2 Plotting quadratic graphs 16.3 Using quadratic graphs 16.4 Factorising quadratic expressions 16.5 Solving quadratic equations algebraically <u>Unit 17 Perimeter, area and volume 2</u> 17.1 Circumference of a circle 1 17.2 Circumference of a circle 2 17.3 Area of a circle 17.4 Semicircles and sectors 17.5 Composite 2D	<u>Foundation</u> <u>Unit 18 Fractions, indices and standard form</u> 18.1 Multiplying and dividing fractions 18.2 The laws of indices 18.3 Writing large numbers in standard form 18.4 Writing small numbers in standard form 18.5 Calculating with standard form <u>Unit 19 Congruence, similarity and vectors</u> 19.1 Similarity and enlargement 19.2 More similarity 19.3 Using similarity 19.4 Congruence 1 19.5 Congruence 2 19.6 Vectors 1 19.7 Vectors 2 <u>Higher</u>	<u>Foundation</u> <u>Unit 20 More algebra</u> 20.1 Graphs of cubic and reciprocal functions 20.2 Non-linear graphs 20.3 Solving simultaneous equations graphically 20.4 Solving simultaneous equations algebraically 20.5 Rearranging formulae 20.6 Proof <u>Higher</u> <u>Unit 19 Proportion and graphs</u> 19.1 Direct proportion 19.2 More direct proportion 19.3 Inverse proportion 19.4 Exponential functions		



15.1 3D solids
15.2 Plans and elevations
15.3 Accurate drawings 1
15.4 Scale drawings and maps
15.5 Accurate drawings 2
15.6 Constructions
15.7 Loci and regions
15.8 Bearings

Higher

Unit 13 More trigonometry

13.1 Accuracy
13.2 Graph of the sine function
13.3 Graph of the cosine function
13.4 The tangent function
13.5 Calculating areas and the sine rule
13.6 The cosine rule and 2D trigonometric problems
13.7 Solving problems in 3D
13.8 Transforming trigonometric graphs 1
13.9 Transforming trigonometric graphs 2

Unit 14 Further statistics

14.1 Sampling
14.2 Cumulative frequency
14.3 Box plots
14.4 Drawing histograms
14.5 Interpreting histograms
14.6 Comparing and describing populations

shapes and cylinders
17.6 Pyramids and cones
17.7 Spheres and composite solids

Higher

Unit 15 Equations and graphs

15.1 Solving simultaneous equations graphically
15.2 Representing inequalities graphically
15.3 Graphs of quadratic functions
15.4 Solving quadratic equations graphically
15.5 Graphs of cubic functions

Unit 16 Circle theorems

16.1 Radii and chords
16.2 Tangents
16.3 Angles in circles 1
16.4 Angles in circles 2
16.5 Applying circle theorems

Unit 17 More algebra

17.1 Rearranging formulae
17.2 Algebraic fractions
17.3 Simplifying algebraic fractions
17.4 More algebraic fractions
17.5 Surds
17.6 Solving algebraic fraction equations
17.7 Functions
17.8 Proof

Unit 18 Vectors and geometric proof

18.1 Vectors and vector notation
18.2 Vector arithmetic
18.3 More vector arithmetic
18.4 Parallel vectors and collinear points
18.5 Solving geometric problems

19.5 Non-linear graphs
19.6 Translating graphs of functions
19.7 Reflecting and stretching graphs of functions

Key Stage 5

Exam Board: Edexcel

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 12	<u>Pure</u> Algebraic expressions Quadratics Equations and inequalities Graphs and Transformations <u>Applied</u> Probability Statistical distributions Hypothesis testing	<u>Pure</u> Straight line graphs Circles Algebraic Methods The binomial expansion <u>Applied</u> Data Collection Measures of location and spread Representations of data Correlation	<u>Pure</u> Trigonometric ratios Trigonometric identities & equations Vectors <u>Applied</u> Modelling in mechanics Constant acceleration	<u>Pure</u> Differentiation Integration <u>Applied</u> Forces and motion	<u>Pure</u> Exponentials & Logarithms <u>Applied</u> Variable acceleration	Revision <u>Year 13 Pure</u> Algebraic Methods Functions & graphs Sequences & series
Year 13	<u>Pure</u> Algebraic Methods Functions & graphs Sequences & series Binomial expansion <u>Applied</u> Moments Forces & friction Projectiles	<u>Pure</u> Radians Trigonometric functions Trigonometry & modelling <u>Applied</u> Applications of forces Further kinematics	<u>Pure</u> Parametric equations Differentiation Numerical Methods <u>Applied</u> Regression, correlation & hypothesis testing Conditional probability	<u>Pure</u> Integration <u>Applied</u> Vectors The normal distribution	Revision Exams	Revision Exams