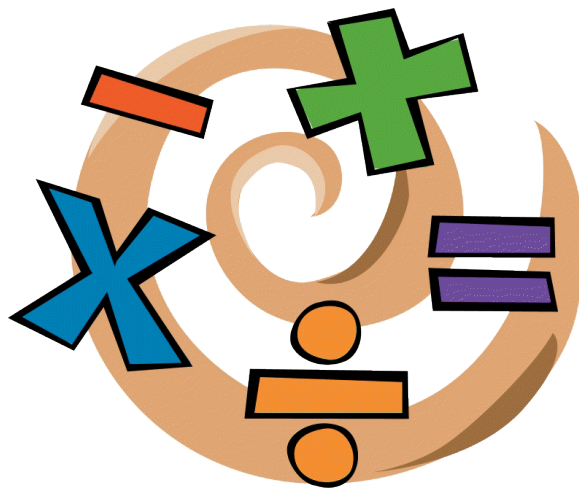


GCSE

Mathematics

Revision Guidance



Tudor
Grange
ACADEMY
WORCESTER



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Course Details.

The mathematics course that you are studying is with **Edexcel (GCSE 1-9)**.

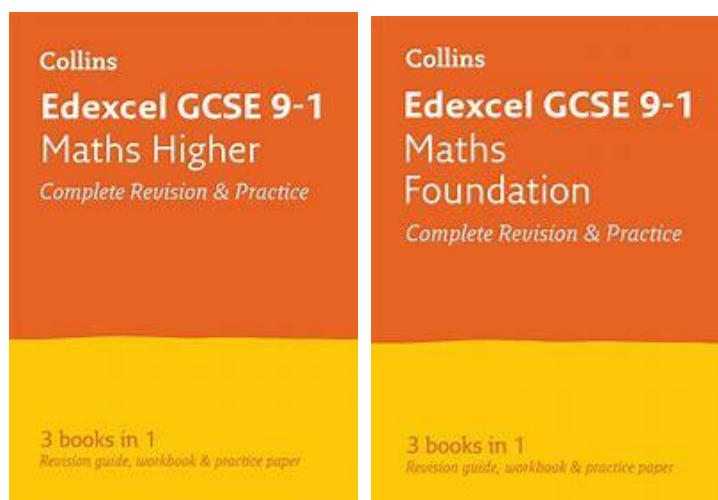
The examination consists of 3 papers, each lasting 90 minutes and worth 80 marks. The first paper is a non-calculator paper and the second and third papers are both calculator papers. This means that your final maths score will be out of 240 marks.

Exam Dates.

Paper Title	Length/ Time	Marks	Worth	Date
GCSE mathematics paper 1	90 minutes	80	1/3	15th May 2025
GCSE mathematics paper 2	90 minutes	80	1/3	4th June 2025
GCSE mathematics paper 3	90 minutes	80	1/3	11th June 2025

Textbooks and Revision Guides.

To support your revision you may wish to buy one of the following revision workbook and guides:

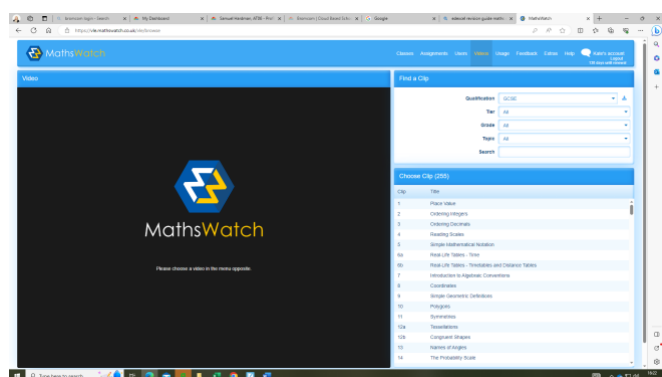


These can be purchased through parent portal for a cost of £5 for a workbook/revision guide. This is significantly cheaper than purchasing them new online or on the high-street.

Apps and Websites.

To support your revision you may also wish to use revision websites and/or apps. Below are some suggests for you.

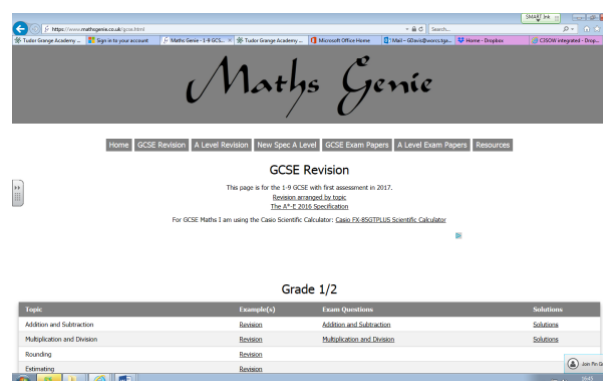
For revision content:



www.mathswatch.co.uk

(Online tutorials and exercises/activities)

Username: jbloggs@tgacad



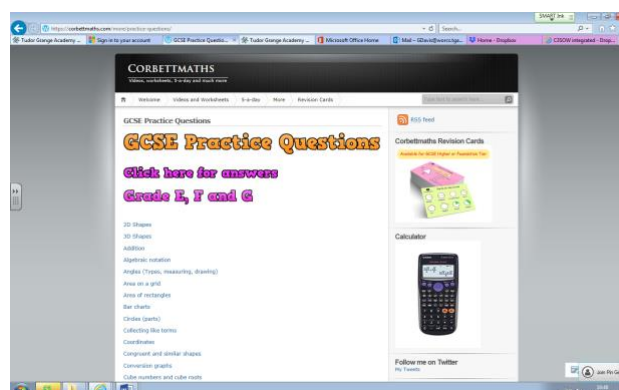
www.mathsgenie.co.uk

(Past papers online, videos and GCSE questions)



www.mathedup.co.uk

(Online videos, GCSE questions with answers and quizzes with instant feedback)



www.corbettmaths.com

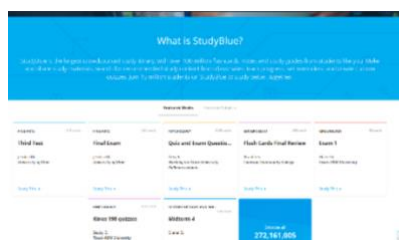
(Videos and GCSE questions, also 5 a day activities)

For organising your revision:



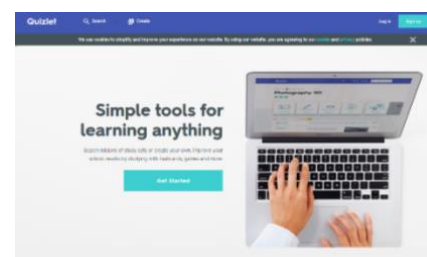
<https://getrevising.co.uk/>

Study Blue



<https://www.studyblue.com/>

Quizlet



<https://quizlet.com/en-gb>

What do I need to revise (Higher tier)?

HIGHER - Grades 4 – 9

Algebra

I can do this	Grade	Title
	9	Approximate solutions to equations using iteration.
	9	Equation of a circle
	9	Equation of a tangent
	8	Algebra and Proof
	8	Gradients and area under a graph
	8	Graphs of trigonometric functions
	8	Quadratic equations (completing the square)
	7	Composite functions
	7	Expand the product of two or more binomials
	7	Factorising difficult quadratic expressions
	7	Geometric Sequences
	7	Graphs of exponential functions
	7	Quadratic equations (needing re-arrangement)
	7	Quadratic equations (quadratic formula)
	7	Real-life exponential graphs
	7	Represent quadratic inequalities
	7	Simultaneous equations (non-linear)
	7	Solve quadratic inequalities
	7	Translations and reflections of a function
	7	Turning points & completing the square
	6	Algebraic fractions
	6	Identifying parallel lines
	6	Inverse functions
	6	Linear inequalities in two variables
	6	n th term of a quadratic sequence
	6	Quadratic equations (factorisation)

I can do this	Grade	Title
	6	Quadratic equations (graphical methods)
	6	Represent linear inequalities
	6	Simultaneous equations (linear)
	5	Algebraic argument
	5	Algebraic terminology
	5	Cubic and Reciprocal graphs
	5	Deduce quadratic roots algebraically
	5	Derive an equation
	5	Equation of a line
	5	Expand the product of two binomials
	5	Factorising quadratic expressions
	5	Fibonacci, quadratic and simple geometric sequences
	5	Graphical solution to equations
	5	Inequalities on number lines
	5	Linear equations
	5	Quadratic graphs
	5	Reciprocal real-life graphs
	5	Simplify indices
	5	Simplify surds
	5	Solve linear inequalities in one variable
	5	Writing formulae and expressions
	4	Changing the subject
	4	Collecting like terms
	4	Expressions
	4	Factorise single bracket
	4	Finding the equation of a line
	4	Graphs of linear functions
	4	Graphs of quadratic functions
	4	Linear equations one unknown
	4	Multiplying single brackets
	4	Non-standard real life graphs
	4	n th term of a linear sequence
	4	Number machines
	4	Substitution
	4	Using " $y = mx + c$ "

Geometry and Measures

I can do this	Grade	Title
	8	Circle theorems
	8	Vector arguments and proof
	7	Area of a triangle
	7	Cosine Rule
	7	Pythagoras and trig 2D and 3D
	7	Sine Rule
	6	Combined transformations
	6	Congruence and Similarity
	6	Standard trigonometric ratios
	5	Arc lengths and sectors
	5	Derive triangle results
	5	Enlargements and negative SF
	5	Loci
	5	Pythagoras
	5	Similarity and Congruence
	5	Standard constructions
	5	Surface Area
	5	Trigonometric ratios
	5	Volume
	4	Alternate and corresponding angles
	4	Area of a circle
	4	Areas of composite shapes
	4	Areas of triangles, trapezia and parallelograms
	4	Bearings
	4	Circle terminology
	4	Circumference of a circle
	4	Congruent triangles
	4	Enlargements and fractional SF
	4	Perimeter of 2D shapes
	4	Plans and elevations
	4	Polygons
	4	Solve geometrical problems
	4	Vector arithmetic
	4	Volume of prisms

Statistics

I can do this	Grade	Title
	6	Boxplots
	6	Cumulative frequency
	6	Histograms with unequal class widths
	6	Quartiles and Interquartile Range
	5	Histograms with equal class widths
	5	Scatter graphs
	4	Comparing data using graphs
	4	Comparing Distributions
	4	Correlation
	4	Population
	4	Sampling
	4	Scatter Diagrams
	4	Time series

Probability

I can do this	Grade	Title
	7	Conditional Probability
	5	Probability of dependent events
	5	Probability of independent events
	4	Mutually exclusive sum
	4	Relative Frequency
	4	Tables and Grids
	4	Theoretical Probability
	4	Unbiased Samples
	4	Venn Diagrams

Number

I can do this	Grade	Title
	8	Surds
	7	Index Laws (negative and fractional)
	7	Product rule
	7	Recurring Decimals
	7	Upper and lower bounds
	6	Finance 1
	6	Powers and Roots
	6	Product of prime factors
	6	Using Pi
	5	Calculating with fractions
	5	Error intervals
	5	Index Laws
	5	Limits of accuracy
	4	Adding and subtracting fractions
	4	Checking calculations
	4	Compound measures
	4	Converting metric units
	4	Estimation
	4	Fractions and percentages
	4	Fractions and ratio problems
	4	Interpret calculator displays
	4	LCM and HCF
	4	Multiples and factors
	4	Multiplying fractions
	4	Operations
	4	Order of operations
	4	Powers
	4	Rounding
	4	Standard Form
	4	Terminating decimals and fractions

Ratio, Proportion and rates of change

I can do this	Grade	Title
	9	Gradients and the rate of change
	7	General iterative processes
	6	Direct and inverse proportion
	5	Compound Units
	5	Gradient & the rate of change
	5	Growth and decay
	5	Interpret Proportion
	5	Percentage change
	5	Problems with compound units
	5	Scale factors and similarity
	5	Simple Interest and Financial Maths
	5	Solve Proportion Problems
	4	Compare Fractions, Decimals and Percentages
	4	Compare lengths, area, volume
	4	Comparing quantities as a ratio
	4	Division of a quantity as a ratio
	4	Express one quantity as a % of another
	4	Percentage change
	4	Problems involving ratio
	4	Proportion and ratio
	4	Ratio and fractions
	4	Ratio Sharing

What do I need to revise (Foundation tier)?

FOUNDATION - Grades 1 - 5

Geometry and Measures

I can do this	Grade	Title
	5	Arc lengths and sectors
	5	Derive triangle results
	5	Enlargements and negative SF
	5	Loci
	5	Pythagoras
	5	Similarity and Congruence
	5	Standard constructions
	5	Surface Area
	5	Trigonometric ratios
	5	Volume
	4	Alternate and corresponding angles
	4	Area of a circle
	4	Areas of composite shapes
	4	Areas of triangles, trapezia and parallelograms
	4	Bearings
	4	Circle terminology
	4	Circumference of a circle
	4	Congruent triangles
	4	Enlargements and fractional SF
	4	Perimeter of 2D shapes
	4	Plans and elevations
	4	Polygons
	4	Solve geometrical problems
	4	Vector arithmetic
	4	Volume of prisms
	3	3-D Shapes
	3	Congruent and similar shapes
	3	Geometrical terminology and diagrams
	3	Measuring lines and angles
	3	Properties of quadrilaterals
	3	Properties of triangles
	3	Translations and vectors
	3	Using standard units

Algebra

I can do this	Grade	Title
	5	Algebraic terminology
	5	Cubic and Reciprocal graphs
	5	Deduce quadratic roots algebraically
	5	Derive an equation
	5	Equation of a line
	5	Expand the product of two binomials
	5	Factorising quadratic expressions
	5	Fibonacci, quadratic and simple geometric sequences
	5	Graphical solution to equations
	5	Inequalities on number lines
	5	Linear equations
	5	Quadratic graphs
	5	Reciprocal real-life graphs
	5	Simplify indices
	5	Simplify surds
	5	Solve linear inequalities in one variable
	5	Writing formulae and expressions
	4	Changing the subject
	4	Collecting like terms
	4	Expressions
	4	Factorise single bracket
	4	Finding the equation of a line
	4	Graphs of linear functions
	4	Graphs of quadratic functions
	4	Linear equations one unknown
	4	Multiplying single brackets
	4	Non-standard real life graphs
	4	n th term of a linear sequence
	4	Number machines
	4	Substitution
	4	Using " $y = mx + c$ "
	3	Coordinates in four quadrants
	3	Plotting straight line graphs
	3	Position to term rules
	3	Sequences of square, triangular and cube numbers
	3	Using Formulae
	2	Sequences and Rules

Statistics

I can do this	Grade	Title
	5	Histograms with equal class widths
	5	Scatter graphs
	4	Comparing data using graphs
	4	Comparing Distributions
	4	Correlation
	4	Population
	4	Sampling
	4	Scatter Diagrams
	4	Time series
	3	Charts and Diagrams
	3	Pie Charts
	3	Types of data
	3	Vertical Line Charts

Ratio, Proportion and rates of change

I can do this	Grade	Title
	5	Compound Units
	5	Gradient & the rate of change
	5	Growth and decay
	5	Interpret Proportion
	5	Percentage change
	5	Problems with compound units
	5	Scale factors and similarity
	5	Simple Interest and Financial Maths
	5	Solve Proportion Problems
	4	Compare Fractions, Decimals and Percentages
	4	Compare lengths, area, volume
	4	Comparing quantities as a ratio
	4	Division of a quantity as a ratio
	4	Express one quantity as a % of another
	4	Percentage change
	4	Problems involving ratio
	4	Proportion and ratio
	4	Ratio and fractions
	4	Ratio Sharing
	3	Convert standard units
	3	Express one quantity as a fraction of another
	3	Use ratio notation
	3	Use scale factors, diagrams and maps

Number

I can do this	Grade	Title
	5	Calculating with fractions
	5	Error intervals
	5	Index Laws
	5	Limits of accuracy
	4	Adding and subtracting fractions
	4	Checking calculations
	4	Compound measures
	4	Converting metric units
	4	Estimation
	4	Fractions and percentages
	4	Fractions and ratio problems
	4	Interpret calculator displays
	4	LCM and HCF
	4	Multiples and factors
	4	Multiplying fractions
	4	Operations
	4	Order of operations
	4	Powers
	4	Rounding
	4	Standard Form
	4	Terminating decimals and fractions
	3	Decimals
	3	Listing outcomes
	3	Prime numbers
	3	Using standard units
	2	Add and Subtract integers
	2	Dividing integers
	2	Multiplying integers
	2	Ordering numbers
	2	Place value

Probability

I can do this	Grade	Title
	5	Probability of dependent events
	5	Probability of independent events
	4	Mutually exclusive sum
	4	Relative Frequency
	4	Tables and Grids
	4	Theoretical Probability
	4	Unbiased Samples
	4	Venn Diagrams
	3	Frequency Trees
	3	Probability of equally likely outcomes

