

GCSE Maths RAG Sheet

Every Higher topic on one sheet. Rate each one Red, Amber or Green, stick it on the wall and turn the reds green.

 398 topics • Grades 1 to 9

 Print it, tick it, date it

 Revise the reds first

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Rate every topic. Turn the reds green.

Tick R, A or G for each topic. Revise the reds first, then check again and write the date.

R Can't do it yet A Shaky G Confident

TOPIC	GRADE	RATING	CHECKED	CHECKED	CHECKED
Number 72 topics					
BIDMAS with Numbers	1	R A G			
Ordering Whole Numbers	1	R A G			
Ordering Decimals	1	R A G			
Ordering Negatives	1	R A G			
Integers & Non Integers	2	R A G			
Adding Integers	2	R A G			
Subtracting Integers	2	R A G			
Grid Method for Multiplication	2	R A G			
Column Method for Multiplication	2	R A G			
Lattice Method for Multiplication	2	R A G			
Bus Stop Method for Division	2	R A G			
Bus Stop Method with Large Numbers	2	R A G			
Adding & Subtracting Negatives	2	R A G			
Multiplying & Dividing Negatives	2	R A G			
Simplifying Fractions	2	R A G			
Writing Fractions as Mixed Numbers	2	R A G			
Finding a Fraction of an Amount	2	R A G			
Rounding to Decimal Places	2	R A G			
Rounding to Nearest Power of 10	2	R A G			
Truncating Decimals	2	R A G			
Squaring & Square Rooting	2	R A G			
Square, Cube & Prime Numbers	3	R A G			
Multiples & Factors	3	R A G			
Lowest Common Multiple	3	R A G			
Highest Common Factor	3	R A G			
Expressing as a Fraction	3	R A G			
Finding Fractions of Shapes	3	R A G			
Multiplying Fractions	3	R A G			
Dividing Fractions	3	R A G			
Adding Decimals	3	R A G			
Subtracting Decimals	3	R A G			
Multiplying Decimals	3	R A G			
Dividing Decimals	3	R A G			
Converting Decimals & Percentages	3	R A G			
Writing Decimals & Percentages as Fractions	3	R A G			
Writing Fractions as Decimals & Percentages	3	R A G			
Converting Improper Fractions to Decimals	3	R A G			
Rounding to Significant Figures	3	R A G			

TOPIC	GRADE	RATING			CHECKED	CHECKED	CHECKED
Powers Greater than Two	3	R	A	G			
Prime Factors & Factorisations	4	R	A	G			
Common Denominators	4	R	A	G			
Ordering Fractions	4	R	A	G			
Adding Fractions	4	R	A	G			
Subtracting Fractions	4	R	A	G			
Adding & Subtracting Mixed Numbers	4	R	A	G			
Multiplying Mixed Numbers	4	R	A	G			
Dividing Mixed Numbers	4	R	A	G			
Estimating Calculations	4	R	A	G			
Standard Form Conversions	4	R	A	G			
Powers of Zero & One	4	R	A	G			
Simplifying Powers	4	R	A	G			
Rational & Irrational Numbers	5	R	A	G			
Venn Diagram Method	5	R	A	G			
Applied Estimating	5	R	A	G			
Finding Bounds & Error Intervals	5	R	A	G			
Bounds & Error Intervals for Truncated Decimals	5	R	A	G			
Bounds Requiring Integer Values	5	R	A	G			
Adding & Subtracting in Standard Form	5	R	A	G			
Multiplying & Dividing in Standard Form	5	R	A	G			
Negative Powers	5	R	A	G			
Estimating Roots	6	R	A	G			
Fractions with Negative Powers	6	R	A	G			
Writing Recurring Decimals as Fractions	7	R	A	G			
Writing Fractions as Recurring Decimals	7	R	A	G			
Bounds & Error Intervals Involving Calculations	7	R	A	G			
Fractional Powers	7	R	A	G			
Six Laws of Surds	7	R	A	G			
Rationalising of the Form $\sqrt{A}$	7	R	A	G			
Expanding Brackets with Surds	7	R	A	G			
Combining Upper & Lower Bounds	8	R	A	G			
Simplifying Surds	8	R	A	G			
Rationalising of the Form $A + \sqrt{B}$	9	R	A	G			

Algebra 95 topics

The Four Quadrants	1	R	A	G			
Collecting Like Terms	2	R	A	G			
Understanding Key Vocabulary	2	R	A	G			
Function Machines	2	R	A	G			
Multiplying Algebraic Terms	3	R	A	G			
Substitution	3	R	A	G			
Substituting Into Real-Life Formulae	3	R	A	G			
Expanding Single Brackets	3	R	A	G			
Fundamentals of Rearranging Equations	3	R	A	G			
Fundamentals of Solving Equations	3	R	A	G			

TOPIC	GRADE	RATING	CHECKED	CHECKED	CHECKED
Fundamentals of Inequalities	3	R A G			
Drawing Inequalities on Number Lines	3	R A G			
Sketching Straight Lines Using Tables	3	R A G			
Vertical & Horizontal Lines	3	R A G			
Conversion Graphs	3	R A G			
BIDMAS with Algebra	4	R A G			
Factorising Single Brackets	4	R A G			
Expanding Double Brackets	4	R A G			
Types of Sequences	4	R A G			
Nth Term of Linear Sequences	4	R A G			
Position to Term Rule Using Patterns	4	R A G			
Midpoint of Two Points	4	R A G			
Identifying if a Point is on a Line	4	R A G			
Sketching Straight Lines Using $y=mx+c$	4	R A G			
Rearranging to the Form $y=mx+c$	4	R A G			
Calculating the Gradient of a Line	4	R A G			
Identifying the x & y Intercepts of a Straight Line	4	R A G			
Factorising Double Brackets	5	R A G			
Difference of Two Squares	5	R A G			
Solving Quadratics by Factorising when $a=1$	5	R A G			
Solving Quadratics by Factorising when $c=0$	5	R A G			
Solving Single Inequalities	5	R A G			
Solving Compound Inequalities	5	R A G			
Solving Linear Simultaneous Equations	5	R A G			
Applied Simultaneous Equations Problems	5	R A G			
Proving Equivalence	5	R A G			
Proof with Multiples	5	R A G			
Proof by Counter Example	5	R A G			
Deciding if a Term is in a Sequence	5	R A G			
Finding Terms in a Fibonacci Sequence	5	R A G			
Finding the Distance Between Two Points	5	R A G			
Finding Equations of a Straight Line Using Two Points	5	R A G			
Finding Equations of a Straight Line with a Point & a Gradient	5	R A G			
Finding Equations of Linear Real-Life Graphs	5	R A G			
General Shape of a Quadratic	5	R A G			
Plotting Quadratics	5	R A G			
Plotting a Cubic	5	R A G			
Solving Linear Simultaneous Equations Graphically	5	R A G			
Properties of Parallel Lines	5	R A G			
Reciprocal Graphs	5	R A G			
Matching Shapes to Graphs	5	R A G			
Distance Between Two Points	5	R A G			
Rearranging Harder Equations	6	R A G			
Solving Harder Equations	6	R A G			
Fundamentals of Functions	6	R A G			
Simplifying Algebraic Fractions	6	R A G			

TOPIC	GRADE	RATING	CHECKED	CHECKED	CHECKED
Expanding Triple Brackets	7	R A G			
Equating Coefficients	7	R A G			
Solving Quadratics with the Quadratic Formula	7	R A G			
Solving Quadratics by Factorising ($a > 1$)	7	R A G			
Composite Functions	7	R A G			
Inverse Functions	7	R A G			
Iteration Equations	7	R A G			
Proof with Even Numbers	7	R A G			
Proof with Odd Numbers	7	R A G			
Proof with Square Numbers	7	R A G			
Nth Term of Quadratic Sequences	7	R A G			
Sets & Inequalities	7	R A G			
Identifying the x Intercepts of Quadratics	7	R A G			
Identifying the y Intercepts of Quadratics	7	R A G			
Identifying the Turning Points of Quadratics	7	R A G			
Full Process for Sketching Quadratics	7	R A G			
Identifying the Roots of a Quadratic from a Graph	7	R A G			
Solving Quadratic Simultaneous Equations Graphically	7	R A G			
Properties of Perpendicular Lines	7	R A G			
Sketching Exponential Graphs	7	R A G			
General Form of the Equation of a Circle	7	R A G			
Sketching Circles	7	R A G			
Sketching Linear Inequalities	7	R A G			
Shading Regions with Graphical Inequalities	7	R A G			
Solving Quadratics by Completing the Square ($a = 1$)	8	R A G			
Solving Quadratic Simultaneous Equations	8	R A G			
Change of Signs	8	R A G			
Algebraic Fractions Involving Factorising	8	R A G			
Multiplying & Dividing Algebraic Fractions	8	R A G			
Proof with Consecutive Numbers	8	R A G			
Sketching Quadratic Inequalities	8	R A G			
Sketching sin, cos & tan	8	R A G			
Transforming Trigonometric Graphs	8	R A G			
Calculating Values of Trig Functions Using Graphs	8	R A G			
Solving Trigonometric Equations Using A Graph	8	R A G			
Solving Quadratics By Completing the Square ($a > 1$)	9	R A G			
Solving Quadratic Inequalities	9	R A G			
Finding Equations of Tangents to Circles	9	R A G			
Estimating Areas Under Curves	9	R A G			

■ **Ratio, Proportion & Rates of Change** 46 topics

Percentage of an Amount	3	R A G			
Percentage Change	3	R A G			
One number as a Percentage of Another	3	R A G			
Writing Ratios as Fractions	3	R A G			
Simplifying Ratios	3	R A G			

TOPIC	GRADE	RATING			CHECKED	CHECKED	CHECKED
Scaling Up Ratios	3	R	A	G			
Calculating Price Changes	3	R	A	G			
Simple Interest	3	R	A	G			
Speed, Distance & Time Calculations	3	R	A	G			
Density, Mass & Volume Calculations	3	R	A	G			
Standard Unit Conversions	3	R	A	G			
Percentages Greater than 100	4	R	A	G			
Proportional Division	4	R	A	G			
Using Ratio Differences	4	R	A	G			
Direct Proportion Problems	4	R	A	G			
Inverse Proportion Problems	4	R	A	G			
Like for Like Comparisons	4	R	A	G			
Pressure, Force & Area Calculations	4	R	A	G			
Area Conversions	4	R	A	G			
Volume Conversions	4	R	A	G			
Time Conversions	4	R	A	G			
Reverse Percentages	5	R	A	G			
Identifying Percentage Changes	5	R	A	G			
Expressing Ratios as Linear Equations	5	R	A	G			
Profit & Loss	5	R	A	G			
Applied Best Buys	5	R	A	G			
Percentage Multipliers	5	R	A	G			
Compound Interest	5	R	A	G			
Compound Decay	5	R	A	G			
Converting Compound Measures	5	R	A	G			
Currency Conversions	5	R	A	G			
Direct Proportion Graphs	5	R	A	G			
Inverse Proportion Graphs	5	R	A	G			
Key Regions on Distance-Time Graphs	5	R	A	G			
Calculating Average Speed Using Distance Time Graphs	5	R	A	G			
Gradient as a Rate of Change	5	R	A	G			
Combining Ratios	6	R	A	G			
Key Regions on Speed-Time Graphs	6	R	A	G			
Calculating Acceleration using Speed-Time Graphs	6	R	A	G			
Algebraic Direct Proportion	7	R	A	G			
Algebraic Inverse Proportion	7	R	A	G			
Finding the Initial Amount	7	R	A	G			
Calculating Total Distance Travelled Using Speed-Time Graphs	7	R	A	G			
Average Gradients of Lines	7	R	A	G			
Instantaneous Gradients of Lines	7	R	A	G			
Direct & Inverse Proportion with Functions	8	R	A	G			

■ **Geometry & Measures** 114 topics

Types of Angles	1	R	A	G			
Angle Notation	1	R	A	G			

TOPIC	GRADE	RATING			CHECKED	CHECKED	CHECKED
Identifying 3D Shapes	1	R	A	G			
Faces, Edges & Vertices	1	R	A	G			
Lines of Symmetry	1	R	A	G			
Identifying Regular Polygons	2	R	A	G			
Types of Quadrilaterals	2	R	A	G			
Types of Triangles	2	R	A	G			
Triangle Angle & Side Naming Conventions	2	R	A	G			
Triangle Angle & Side Facts	2	R	A	G			
Angles on a Straight Line	2	R	A	G			
Angles Round a Point	2	R	A	G			
Opposite Angles	2	R	A	G			
Area of Squares & Rectangles	2	R	A	G			
Area of Rhombuses & Parallelograms	2	R	A	G			
Area of Triangles ($\frac{1}{2} \times \text{base} \times \text{height}$)	2	R	A	G			
Perimeter of Squares & Rectangles	2	R	A	G			
Perimeter of Rhombuses & Parallelograms	2	R	A	G			
Volume of Cubes & Cuboids	2	R	A	G			
Rotational Symmetry	2	R	A	G			
Fundamentals of Congruence	2	R	A	G			
Angles in Triangles	3	R	A	G			
Angles in Quadrilaterals	3	R	A	G			
Internal Angles in a Regular Polygon	3	R	A	G			
External Angles in a Regular Polygon	3	R	A	G			
Area of Trapeziums	3	R	A	G			
Area of a Circle	3	R	A	G			
Area of a Semi Circle	3	R	A	G			
Perimeter of a Circle	3	R	A	G			
Perimeter of a Semi Circle	3	R	A	G			
Surface Area of Cubes & Cuboids	3	R	A	G			
Identifying Plans & Elevations	3	R	A	G			
Sketching Projections	3	R	A	G			
Translations	3	R	A	G			
Rotations	3	R	A	G			
Reflections	3	R	A	G			
Alternate Angles	3	R	A	G			
Co-Interior Angles	3	R	A	G			
Corresponding Angles	3	R	A	G			
Scale Drawings	3	R	A	G			
Key Circle Terms	3	R	A	G			
Circumference of a Circle	3	R	A	G			
Measuring Bearings	3	R	A	G			
Perimeter of Triangles	4	R	A	G			
Perimeter of Trapeziums	4	R	A	G			
Volume of Prisms	4	R	A	G			
Enlargements with Positive Integer Scale Factors	4	R	A	G			
Drawing a Locus of All Points	4	R	A	G			

TOPIC	GRADE	RATING			CHECKED	CHECKED	CHECKED
Drawing Perpendicular Bisectors	4	R	A	G			
Drawing a Perpendicular Line from a Point	4	R	A	G			
Drawing Angles Bisectors	4	R	A	G			
Drawing a 60° Angle	4	R	A	G			
Drawing a 90° Angle	4	R	A	G			
Using Pythagoras to Find Side a Hypotenuse	4	R	A	G			
Using Pythagoras to Find a Non-Hypotenuse Side	4	R	A	G			
Finding Side Lengths of Compound Shapes	5	R	A	G			
Perimeter of Compound Shapes	5	R	A	G			
Area of Compound Shapes	5	R	A	G			
Volume of Cylinders	5	R	A	G			
Volume of Cones	5	R	A	G			
Volume of Pyramids	5	R	A	G			
Volume of Spheres	5	R	A	G			
Volumes of Composite Shapes	5	R	A	G			
Surface Area of Prisms	5	R	A	G			
Surface Area of Cylinders	5	R	A	G			
Surface Area of Cones	5	R	A	G			
Surface Area of Pyramids	5	R	A	G			
Surface Area of Spheres	5	R	A	G			
Surface Area of Composite Shapes	5	R	A	G			
Enlargements with Positive Fractional Scale Factors	5	R	A	G			
Invariant Points	5	R	A	G			
Calculating Scale Factor	5	R	A	G			
Similar Side Lengths	5	R	A	G			
Identifying Congruent Triangles	5	R	A	G			
Area of a Circle Sector	5	R	A	G			
Length of a Circle Arc	5	R	A	G			
Problem Solving with Bearings	5	R	A	G			
Column Vectors & Vector Arithmetic	5	R	A	G			
Fundamentals of Vector Problems	5	R	A	G			
Fundamentals of SOH, CAH, TOA	5	R	A	G			
Finding Side Lengths using SOH, CAH, TOA	5	R	A	G			
Finding Angles using SOH, CAH, TOA	5	R	A	G			
Finding Angles of Elevation & Depression	5	R	A	G			
Finding the Height of an Equilateral Triangle	5	R	A	G			
Bearings Problems Involving SOH, CAH, TOA	5	R	A	G			
Hand Method for Exact Trig Values	5	R	A	G			
Applied Exact Trig Values Questions	5	R	A	G			
SOH, CAH, TOA with Exact Trig Values	5	R	A	G			
Area of Triangles ($\frac{1}{2}ab\sin C$)	6	R	A	G			
Enlargements with Negative Integer Scale Factors	6	R	A	G			
Similar Areas	6	R	A	G			
Similar Volumes	6	R	A	G			
Volume of Frustums	7	R	A	G			
Surface Area of Frustums	7	R	A	G			

TOPIC	GRADE	RATING	CHECKED	CHECKED	CHECKED
Fundamentals of the Sine Rule	7	R A G			
Finding Side Lengths using the Sine Rule	7	R A G			
Finding Angles Using the Sine Rule	7	R A G			
Combining the Sine Rule with Other Rules	7	R A G			
Fundamentals of the Cosine Rule	7	R A G			
Finding Side Lengths using the Cosine Rule	7	R A G			
Finding Angles using the Cosine Rule	7	R A G			
Combining the Cosine Rule with Other Rules	7	R A G			
Calculating Area Using $\frac{1}{2}ab\sin C$	7	R A G			
Calculating Side Lengths using $\frac{1}{2}ab\sin C$	7	R A G			
Finding the Area of a Parallelogram	7	R A G			
Using the Area Rule with Isosceles Triangles	7	R A G			
Circle Theorems	8	R A G			
Combining Circle Theorems	8	R A G			
Translations in the x & y Axis	8	R A G			
Reflections in the x & y Axis	8	R A G			
3D Pythagoras	8	R A G			
3D Trigonometry	8	R A G			
Vector Ratio Problems	9	R A G			
Vectors Along a Straight line	9	R A G			

Probability 29 topics

Fundamentals of Probability	2	R A G			
Fair Objects	3	R A G			
Sample Space Diagrams	4	R A G			
Calculating Probabilities	4	R A G			
Expressing Probabilities in Different Forms	4	R A G			
Fundamentals of Frequency Trees	4	R A G			
Constructing Frequency Trees	4	R A G			
Finding Probabilities with Frequency Trees	4	R A G			
Fundamentals of Tree Diagrams	4	R A G			
Constructing Tree Diagrams	4	R A G			
Calculating Relative Frequency	4	R A G			
Best Relative Frequency Estimates	4	R A G			
Expected Frequency	4	R A G			
Relative Frequency Graphs	4	R A G			
And/Or Rules	5	R A G			
Fundamentals of Set Notation	5	R A G			
Sets & Venn Diagrams	5	R A G			
Finding Probabilities of Sets	5	R A G			
Fundamentals of Venn Diagrams	5	R A G			
Constructing Venn Diagrams	5	R A G			
Finding Probabilities with Venn Diagrams	5	R A G			
Finding Probabilities with Tree Diagrams	5	R A G			
Finding Probabilities with Two Way Tables	5	R A G			
Independence	6	R A G			

TOPIC	GRADE	RATING	CHECKED	CHECKED	CHECKED
Calculating Combinations	6	R A G			
Combinations Problem Solving	7	R A G			
Conditional Probability with Venn Diagrams	8	R A G			
Conditional Probability with Tree Diagrams	8	R A G			
Conditional Probability with Two-Way Tables	8	R A G			

Statistics 42 topics

Quantitative & Qualitative Data	2	R A G			
Discrete & Continuous Data	2	R A G			
Drawing Stem & Leaf Diagrams	2	R A G			
Drawing Bar Charts	2	R A G			
Identifying Mistakes in Bar Charts	2	R A G			
Drawing Line Graphs	2	R A G			
Identifying Mistakes in Line Graphs	2	R A G			
Constructing Pictographs	2	R A G			
Interpreting Pictographs	2	R A G			
Fundamentals of Two Way Tables	3	R A G			
Constructing Two Way Tables	3	R A G			
Simple Random Sampling	3	R A G			
Identifying Biased Samples	3	R A G			
Mode from a List	3	R A G			
Median from a List	3	R A G			
Mean from a List	3	R A G			
Range from a List	3	R A G			
Mean, Mode, Median & Range from Stem & Leaf Diagrams	3	R A G			
Scatter Graph Fundamentals	3	R A G			
Identifying Bias	4	R A G			
Interpreting Ungrouped Frequency Tables	4	R A G			
Mean, Mode, Median & Range from an Ungrouped Frequency Tables	4	R A G			
Working with Tally Charts	4	R A G			
Sketching Frequency Polygons	4	R A G			
Identifying Mistakes with Frequency Polygons	4	R A G			
Lines of Best Fit & Predicting Values	4	R A G			
Danger of Extrapolation	4	R A G			
Reverse Mean from a List	5	R A G			
Interpreting Grouped Frequency Tables	5	R A G			
Mean, Mode & Median from a Grouped Frequency Table	5	R A G			
Drawing Pie Charts	5	R A G			
Interpreting Pie Charts	5	R A G			
Capture-Recapture	6	R A G			
Filling In Cumulative Frequency Tables	6	R A G			
Plotting Cumulative Frequency Graphs	6	R A G			
Drawing Box Plots	6	R A G			
Comparing Data Using Box Plots	6	R A G			
Benefits of IQR & Range	6	R A G			

TOPIC	GRADE	RATING			CHECKED	CHECKED	CHECKED
Cumulative Frequency Median & IQR	7	R	A	G			
Sketching Histograms	8	R	A	G			
Interpreting Histograms	8	R	A	G			
Median from a Histogram	8	R	A	G			