



THIRD SPACE  
LEARNING

# GCSE Maths Revision Mats

Teacher's Guide

# The resource in a nutshell

You've downloaded one in a series of revision mats created to help your Year 11 students revise for GCSE.

There are 6 collections of revision mats covering 13 different topics with a foundation and higher version for each topic. Follow the links below to download each collection.

## 1.Algebra

- Expressions, Equations and Inequalities
- Laws of Indices
- Sequences, Functions & Graphs
- Mathematical Proof

[Download the Algebra Revision Mats](#)

## 2.Number

- Structure and Calculation
- Fractions, Decimals and Percentages
- Measures and Accuracy

[Download the Number Revision Mats](#)

## 3.Geometry & Measure

- Circles and Triangles
- Geometry and Measure
- Methods in Geometry

[Download the Geometry & Measure Revision Mats](#)

## 4.Statistics

[Download the Statistics Revision Mats](#)

## 5.Ratio & Proportion

[Download the Ratio & Proportion Revision Mats](#)

## 6.Probability

[Download the Probability Revision Mats](#)

# How to use

Each revision mat contains a collection of questions that cover the major skills needed for that topic.

Revision mats can be used in a variety of ways:

- In class/revision session
- Form time activity
- Differentiated activities
- Homework

Start by selecting a topic that you want your students to focus on and give them a predetermined amount of time to work through the questions. Use the provided answer sheets to mark the students' work. Using colour when marking can be a great way to help the students to visualise the subtopics that require more work.

If **all of the questions** in a subtopic are **correct**, highlight it in **green**.

If **one or two questions** in a subtopic are **incorrect**, highlight it in **yellow**.

If the **majority of the questions** in a subtopic are **incorrect**, highlight it in **red**.

When a topic area is identified as needing more practice, help your class to practise these topics at <https://thirdspacelearning.com/gcse-maths/>.



## Do you have KS4 students who need additional support in maths?

Our specialist tutors will help them develop the skills they need to succeed at GCSE in weekly one to one online revision lessons. Trusted by secondary schools across the UK.

Visit [thirdspacelearning.com](https://thirdspacelearning.com) to find out more.

# Algebra Revision Mats Topic Coverage

## Expressions, Equations, and Inequalities

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Expanding single brackets</li> <li>Product of binomials</li> <li>Changing the subject</li> <li>Linear equations with one unknown</li> <li>Simplifying expressions</li> <li>Factorising quadratics</li> <li>Simultaneous equations</li> <li>Substitution</li> <li>Inequalities Solving quadratic equations</li> <li>Factorising</li> </ul>	<ul style="list-style-type: none"> <li>Factorising quadratics</li> <li>Simplifying expressions</li> <li>Expanding brackets</li> <li>Product of binomials</li> <li>Completing the square</li> <li>Inequalities</li> <li>Algebraic fractions</li> <li>Changing the subject</li> <li>Iteration</li> <li>Substitution</li> <li>Equations with one unknown</li> <li>Solving quadratic equations</li> <li>Simultaneous equations</li> </ul>

## Laws of Indices (and Surds)

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Powers</li> <li>Roots</li> <li>Working with indices</li> <li>Negative indices</li> <li>Indices and algebraic fractions</li> <li>Simplifying with indices</li> <li>Calculations with brackets</li> </ul>	<ul style="list-style-type: none"> <li>Indices and products</li> <li>Indices and algebraic fractions</li> <li>Arithmetic with surds</li> <li>Indices and surds</li> <li>Reducing surds</li> <li>Surds and brackets</li> <li>Indices and division</li> <li>Simplifying with indices</li> <li>Indices and brackets</li> <li>Rationalising denominators</li> <li>Calculations with brackets</li> <li>Products of binomials involving surds</li> </ul>

## Mathematical Proof

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Even number</li> <li>Odd numbers</li> <li>Mathematical arguments</li> <li>Consecutive numbers</li> <li>Counterexamples</li> </ul>	<ul style="list-style-type: none"> <li>Even number</li> <li>Odd numbers</li> <li>Consecutive numbers</li> <li>Direct proof of a statement</li> <li>Using algebra skill</li> <li>Counterexamples</li> </ul>

## Sequences, Functions and Graphs

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Visualising sequences</li> <li>Finding terms</li> <li>Term-to-term rules</li> <li>Coordinates</li> <li>Recognising graphs</li> <li>Number machines</li> <li>Special sequences</li> <li>Finding the nth term</li> <li>Using the nth term</li> <li>Linear graphs</li> <li>Quadratic graphs</li> </ul>	<ul style="list-style-type: none"> <li>Sequences</li> <li>Function notation</li> <li>Linear graphs</li> <li>Quadratic graphs</li> <li>Using the nth term</li> <li>Finding the nth term</li> <li>Inverse functions</li> <li>Composite functions</li> <li>Exponential and reciprocal graphs</li> <li>Circle graphs</li> </ul>

# Number Revision Mats Topic Coverage

## Structure & Calculation

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Place value</li> <li>Prime numbers</li> <li>Calculation</li> <li>Directed numbers</li> <li>Comparing numbers</li> <li>Common factors</li> <li>Common multiples</li> <li>Order of operations</li> <li>Standard form</li> </ul>	<ul style="list-style-type: none"> <li>Prime numbers</li> <li>Calculation</li> <li>Directed numbers</li> <li>Comparing numbers</li> <li>Common factors</li> <li>Common multiples</li> <li>Order of operations</li> <li>Standard form</li> <li>Calculations using standard form</li> </ul>

## Fractions, Decimals & Percentages

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Equivalence</li> <li>Fraction arithmetic</li> <li>Converting fractions, decimals &amp; percentages</li> <li>Writing percentages</li> <li>Comparing fractions</li> <li>Fractions as operators</li> <li>Decimal arithmetic</li> <li>Writing percentages</li> <li>Percentages as operators</li> <li>Percentage increase and decrease</li> <li>Simple interest</li> </ul>	<ul style="list-style-type: none"> <li>Equivalence</li> <li>Fraction arithmetic</li> <li>Decimal arithmetic</li> <li>Percentage change</li> <li>Converting fractions, decimals &amp; percentages</li> <li>Fractions as operators</li> <li>Recurring decimals and fractions</li> <li>Reverse percentages</li> <li>Compound interest</li> </ul>

## Measure & Accuracy

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Using results</li> <li>Truncation</li> <li>Rounding to powers of ten</li> <li>Significant figures</li> <li>Rounding to significant figures</li> <li>Estimation</li> <li>Interpreting limits of accuracy</li> <li>Using a calculator</li> </ul>	<ul style="list-style-type: none"> <li>Using results</li> <li>Truncation</li> <li>Rounding to powers of ten</li> <li>Rounding to significant figures</li> <li>Estimation</li> <li>Interpreting limits of accuracy</li> <li>Using a calculator</li> <li>Error intervals</li> <li>Bounds</li> </ul>

# Geometry & Measure Revision Mats Topic Coverage

## Circles and Triangles

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Circle terminology</li> <li>Similarity and congruence</li> <li>Exact trigonometric values</li> <li>Measures in circles</li> <li>Measure in portions of circles</li> <li>Pythagoras' Theorem</li> <li>Trigonometry</li> </ul>	<ul style="list-style-type: none"> <li>Measure in circle</li> <li>Circle theorems</li> <li>Similarity and congruence</li> <li>Using trigonometry</li> <li>3D trigonometry</li> <li>Using Pythagoras' Theorem</li> <li>Sine Rule</li> <li>Cosine Rule</li> <li>Area of a triangle</li> </ul>

## Geometry and Measure

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Perimeter and area in rectangles</li> <li>Area of simple shapes</li> <li>Volume and surface area</li> <li>Angles at a point</li> <li>Using angle facts</li> <li>Exterior angles of polygons</li> <li>Angles in triangles</li> <li>Angles in parallel lines</li> <li>Interior angles of polygons</li> </ul>	<ul style="list-style-type: none"> <li>Area and perimeter</li> <li>Volume and surface area</li> <li>Angles at a point</li> <li>Angles in parallel lines</li> <li>Angles in triangles</li> <li>Angles in polygons</li> <li>Polygon properties</li> <li>Interior and exterior angles</li> </ul>

## Methods in Geometry

Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>Scale factors and enlargement</li> <li>Bearings</li> <li>Describing a transformation</li> <li>Loci</li> <li>Symmetry</li> <li>Reflections</li> <li>Vectors</li> </ul>	<ul style="list-style-type: none"> <li>Reflections</li> <li>Bearings</li> <li>Enlargements</li> <li>Constructions</li> <li>Rotations</li> <li>Loci</li> <li>Translations</li> <li>Vectors</li> </ul>

# Statistics Revision Mats Topic Coverage

Statistics	
Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>• Measure of central tendency &amp; speed</li> <li>• Surveys and sampling</li> <li>• Pie charts</li> <li>• Scatter graphs</li> <li>• Tables</li> <li>• Bar charts</li> <li>• Stem and leaf</li> </ul>	<ul style="list-style-type: none"> <li>• The mean</li> <li>• Mean from grouped data</li> <li>• Time series</li> <li>• Stem and leaf</li> <li>• Measure of location and spread</li> <li>• Cumulative frequency</li> <li>• Box plots</li> <li>• Histograms</li> </ul>

# Ratio & Proportion Revision Mats Topic Coverage

Ratio & Proportion	
Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>• Writing ratio</li> <li>• Simplifying ratio</li> <li>• Sharing in a given ratio</li> <li>• Compound measures</li> <li>• Proportion</li> <li>• Using scale</li> <li>• Conversion using graphs</li> <li>• Distance-time graphs</li> </ul>	<ul style="list-style-type: none"> <li>• Simplifying ratio</li> <li>• Ratio problems</li> <li>• Direct proportion</li> <li>• Inverse proportion</li> <li>• Best buys</li> <li>• Multiplicative reasonings</li> <li>• Describing rates of change</li> <li>• Velocity-time graphs</li> </ul>

# Probability Revision Mats Topic Coverage

Probability	
Foundation & Higher	Higher only
<ul style="list-style-type: none"> <li>• Combinations</li> <li>• Describing probability</li> <li>• Calculating probability</li> <li>• Sample space</li> <li>• Frequency trees</li> <li>• Relative frequency</li> <li>• Calculating probability</li> <li>• Independent events</li> <li>• Dependent events</li> <li>• Probability trees</li> <li>• Venn diagrams</li> </ul>	<ul style="list-style-type: none"> <li>• Relative frequency</li> <li>• Sample space</li> <li>• Expectation</li> <li>• Venn diagrams</li> <li>• Listing outcomes</li> <li>• Tree diagrams</li> <li>• Conditional probability</li> <li>• Mutually exclusive events</li> <li>• Algebra and probability</li> </ul>

# Help ease the pressure with a personalised revision programme for each of your target KS4 students

Our one to one GCSE revision programme is designed to help your target students reach their potential in their GCSE maths exams.

Our specialist maths tutors work one to one with each student, focusing on securing core KS4 content and building familiarity with the kinds of questions they'll be tackling in their GCSE exams.

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