

Revision for Year 7 Maths Exams 7A3, 7A2 & 7B2

Exams: You will sit two one hour papers.
The first will be non-calculator and the second calculator.

This booklet lists all of the topics that you have covered in your Maths lessons this year – if there is anything you are unsure about make sure you ask your Maths teacher.

Maths Revision Tips

- The only way to revise for Maths is to **DO** Maths! Some time making notes can be useful but most of your time must be spent answering questions, the websites below will be helpful for this;
 - **MyMaths** <https://mymaths.co.uk>
login: southam password: integer1
 - **BBC Bitesize** <https://www.bbc.com/education>
 - **EMaths** <https://emaths.co.uk/>
This has the old style SATS papers but they are still a good way to practice your Maths.
- Start with the topics you find most difficult, going over things you can already do is a waste of your time.
 - Get help if you don't understand something.
- Practice using your calculator – it is important that you know how YOUR calculator works as they are all different.

Two-way tables and bar charts	<ul style="list-style-type: none"> • Use two-way tables • Interpret and draw dual bar charts and compound bar charts
Averages and range	<ul style="list-style-type: none"> • Choose the most appropriate average for a set of data • Find the mode, median, mean and range for a set of data • Compare the sets of data using average and the range
Grouped data	<ul style="list-style-type: none"> • Group discrete and continuous data • Draw and interpret grouped frequency diagrams
More graphs	<ul style="list-style-type: none"> • Interpret and draw line graphs • Recognise when a graph is misleading
Pie charts	<ul style="list-style-type: none"> • Draw and interpret pie charts
STEM: Scatter graphs and correlation	<ul style="list-style-type: none"> • Interpret and draw scatter graphs • Describe the correlation between two sets of data • Draw a line of best fit and use it to estimate values
Factors, primes and multiples	<ul style="list-style-type: none"> • Understand the difference between multiples, factors and primes • Find all the factor pairs of any whole numbers • Find the HCF and the LCM of two numbers
Using negative numbers	<ul style="list-style-type: none"> • Add, subtract, multiply and divide positive and negative numbers
Multiplying and dividing	<ul style="list-style-type: none"> • Use mental and written strategies for multiplication • Divide a 3-digit integer by a single or 2-digit integer
Square and square roots	<ul style="list-style-type: none"> • Use index notation for squares and square roots • Calculate with squares and square roots
More powers and roots	<ul style="list-style-type: none"> • Carry out calculations involving squares, cubes, square roots and cube roots • Use factorising to work out square roots and cube roots • Solve word problems using square roots and cube roots
Calculations	<ul style="list-style-type: none"> • Estimate answers to complex calculations • Carry out calculations involving brackets

Simplifying algebraic expressions	<ul style="list-style-type: none"> Simplify expressions by collecting like terms
Writing algebraic expressions	<ul style="list-style-type: none"> Construct expressions using four operations
STEM: Using formulae	<ul style="list-style-type: none"> Substitute into formulae
Writing formulae	<ul style="list-style-type: none"> Derive formulae from a description
Brackets and powers	<ul style="list-style-type: none"> Expand expressions involving brackets Substitute into expressions involving powers
Factorising expressions	<ul style="list-style-type: none"> Factorise an algebraic expression
Ordering decimals	<ul style="list-style-type: none"> Write decimals in ascending and descending order
Rounding decimals	<ul style="list-style-type: none"> Round to decimal places
Adding and subtracting decimals	<ul style="list-style-type: none"> Add and subtract decimals
Multiplying decimals	<ul style="list-style-type: none"> Multiply a decimal by an integer Use place value to multiply decimals
Dividing decimals	<ul style="list-style-type: none"> Divide a number by a whole number Divide a number by a decimal
Fractions, decimals and percentages	<ul style="list-style-type: none"> Convert between fractions, decimals and percentages Compare different proportions using percentages
FINANCE: Working with percentages	<ul style="list-style-type: none"> Calculate percentages with and without a calculator Calculate percentage increase and decrease Work backwards to solve a percentage problem
Triangles, parallelograms and trapeziums	<ul style="list-style-type: none"> Calculate the area of triangles, parallelograms and trapeziums
Perimeter and area of compound shapes	<ul style="list-style-type: none"> Calculate the area and perimeter of shapes made from rectangles and triangles
Properties of 3D solids	<ul style="list-style-type: none"> Identify nets of different solids Know the properties of 3D solids
Surface area	<ul style="list-style-type: none"> Calculate the surface area of cubes and cuboids
Volume	<ul style="list-style-type: none"> Calculate the volume of a cube or a cuboid Convert between cm^3, ml and litres
STEM: Measures of area and volume	<ul style="list-style-type: none"> Convert between metric measures for area and volume
Working with fractions	<ul style="list-style-type: none"> Compare and simplify fractions Write one number as a fraction of another Work out simple fractions of amounts
Adding and subtracting fractions	<ul style="list-style-type: none"> Write an improper fraction as a mixed number Add and subtract fractions
Fractions, decimals and percentages	<ul style="list-style-type: none"> Work with equivalent fractions, decimals and percentages Use division to write a fraction as a decimal
Multiplying and dividing fractions	<ul style="list-style-type: none"> Work out fractions of amounts Divide an integer and a fraction by a fraction Multiply a fraction by a fraction
Working with mixed numbers	<ul style="list-style-type: none"> Add and subtract mixed numbers Enter time as a mixed number into a calculator Multiply and divide a mixed number by a fraction
STEM: Metric and imperial	<ul style="list-style-type: none"> Convert between metric and imperial units Use metric units

Writing ratios	<ul style="list-style-type: none"> • Write a ratio in its simplest form • Simplify a ratio expressed in fractions or decimals
Sharing in a given ratio	<ul style="list-style-type: none"> • Share a quantity in 2 or more parts in a given ratio
Proportion	<ul style="list-style-type: none"> • Understand the relationship between a ratio and proportion
Proportional reasoning	<ul style="list-style-type: none"> • Solve simple word problems involving ratio and direct proportion • Solve simple word problems involving ratio and inverse proportion
Using the unitary method	<ul style="list-style-type: none"> • Solve problems involving ratio and proportion using the unitary method • Write ratios in the form 1:n • Solve best buy problems
Angles and parallel lines	<ul style="list-style-type: none"> • Work out unknown angles when two or more lines meet or cross at a point • Work out unknown angles involving parallel lines
Triangles	<ul style="list-style-type: none"> • Describe the line and rotational symmetry of triangles • Understand how to prove that a result is true • Use properties of a triangle to work out unknown angles • Use the properties of isosceles and equilateral triangles to solve problems
Quadrilaterals	<ul style="list-style-type: none"> • Describe the line and rotational symmetry of quadrilaterals • Describe the properties of quadrilaterals • Solve problems involving quadrilaterals
Polygons	<ul style="list-style-type: none"> • Work out the interior and exterior angles of a polygon
Sequences	<ul style="list-style-type: none"> • Work out the terms of an arithmetic sequence using the term-to-term rule • Work out a given term in a simple arithmetic sequence
The n th term	<ul style="list-style-type: none"> • Work out and use expressions for the term in an arithmetic sequence
Pattern sequences	<ul style="list-style-type: none"> • Generate sequences and predict how they will continue • Recognise geometric sequences and work out the term-to-term rule
Coordinates and line segments	<ul style="list-style-type: none"> • Use positive and negative coordinates • Work out the midpoint of a line segment
Graphs	<ul style="list-style-type: none"> • Draw straight-line graphs • Recognise straight-line graphs parallel to the axes • Recognise graphs of $y = x$ and $y = -x$