

## 1<sup>st</sup> Year Revision List

<p>Understand and use place value</p> <p>Order positive and negative integers, decimals and fractions; use the symbols =, ≠, &lt;, &gt;, ≤, ≥</p> <p>Round numbers to an appropriate degree of accuracy [for example, to a number of decimal places]</p> <p>Use the four operations, including formal written methods, applied to integers and decimals</p> <p>Use standard units of mass, length, time, money and other measures</p>
<p>Recognise and find prime numbers, factors, multiples, common factors, common multiples, highest common factor, lowest common multiple, and express numbers as products of prime factors using factor trees or otherwise. Divisibility tests.</p>
<p>Know the priority of operations, including brackets, powers, roots and reciprocals (BODMAS/ BIDMAS)</p> <p>Use powers and roots (square, cube and higher) and recognise powers of 2, 3, 4, 5</p>
<p>Understand algebraic notation, including:</p> <ul style="list-style-type: none"><li>• <math>ab</math> in place of <math>a \times b</math></li><li>• <math>3y</math> in place of <math>y + y + y</math> and <math>3 \times y</math></li><li>• <math>a^2</math> in place of <math>a \times a</math>, <math>a^3</math> in place of <math>a \times a \times a</math>; <math>a^2b</math> in place of <math>a \times a \times b</math></li><li>• <math>\frac{a}{b}</math> in place of <math>a \div b</math></li><li>• brackets</li></ul> <p>Understand and use the concepts and vocabulary of expressions, equations, inequalities, terms and factors and write expressions.</p>
<p>Manipulate algebraic expressions by:</p> <ul style="list-style-type: none"><li>▪ collecting like terms</li><li>▪ multiplying a single term over a bracket</li><li>▪ taking out common factors</li></ul>
<p>Substitute numbers into formulae and expressions, including scientific formulae</p>
<p>Use algebraic methods to solve linear equations in one variable</p>
<p>Work with coordinates in all four quadrants</p>
<p>Change freely between related standard units [for example time, length, area, volume/capacity, mass]</p>

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Derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, parallelograms and trapezia
Calculate and solve problems involving: perimeters of 2-D shapes (including circles), areas of circles and composite shapes
Apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles
Draw and measure line segments and angles
Understand and use the relationship between parallel lines and alternate and corresponding angles
Derive and use the sum of angles in a triangle and use it to find the angle sum in any polygon and properties of regular polygons
Describe, sketch and draw using conventional terms and notations: points, lines, parallel lines, perpendicular lines, right angles, regular polygons, and other polygons that are reflectively and rotationally symmetric
Derive and illustrate properties of triangles, quadrilaterals, circles, and other plane figures [for example, equal lengths and angles] using appropriate language and technologies
Use the standard conventions for labelling the sides and angles of triangle ABC
Express one quantity as a fraction of another, where the fraction is less than 1 and greater than 1
Order and simplify fractions and understand equivalent fractions
Use the four operations, including formal written methods, applied to proper and improper fractions, and mixed numbers
Work interchangeably with terminating decimals and their corresponding fractions (such as 0.375 and $\frac{3}{8}$ )
Define percentage as 'number of parts per hundred', interpret percentages as a fraction or a decimal, express one quantity as a percentage of another, compare two quantities using percentages and find percentages of amounts
Use ratio notation, including reduction to simplest form
Divide a given quantity into two parts in a given part:part or part:whole ratio; express the division of a quantity into two parts as a ratio
Generate terms of a sequence from either a term-to-term or a position-to-term rule
Recognise arithmetic sequences and find the $n$ th term
Recognise geometric sequences and appreciate other sequences that arise.
Generate theoretical sample spaces for single and combined events with equally likely, mutually exclusive outcomes and use these to calculate theoretical probabilities. Understand that the probabilities of all possible outcomes sum to 1