



Topic	Learning Objectives	Key Vocabulary	Learning Sequence	Linked Learning	Home Learning
Number System	<p>To be able to use the concepts and vocabulary of prime numbers, highest common factors and lowest common multiples</p> <p>To be able to use positive integer powers and associated real roots and recognise powers of 2, 3, 4, 5</p> <p>To be able to recognise and use sequences of triangular, square and cube numbers, and simple arithmetic progressions.</p>	<p>Multiple</p> <p>Factor</p> <p>Indices</p> <p>Root</p> <p>Triangular number, Square number, Cube number, Prime number</p> <p>Linear sequence</p> <p>Index notation</p>	<p>Find the HCF and LCM of numbers and recognise and solve problems involving HCF and LCM</p> <p>Find prime numbers and test numbers to see if they are prime</p> <p>Read, write and evaluate powers</p> <p>Recognise and use triangular, square and cube numbers</p> <p>Define and find square /cube and other roots including the use of a scientific calculator</p>	<p>Know how to find common multiples of two given numbers</p> <p>Know how to find common factors of two given numbers</p> <p>Recall multiplication facts to <math>12 \times 12</math> and associated division facts</p>	<p>There will be a written piece of homework each week to reinforce key concepts</p>
Calculating	<p>To be able to understand and use place value</p> <p>To be able to apply the four operations, including formal written methods, to integers and decimals</p> <p>To be able to use conventional notation for priority of operations, including brackets</p> <p>To be able to recognise and use relationships between operations, including inverse operations</p>	<p>Improper</p> <p>Mixed number</p> <p>Operation</p> <p>Inverse</p> <p>Power</p> <p>Long multiplication</p> <p>Short division</p> <p>Long division</p> <p>Remainder</p> <p>Integer</p>	<p>Multiply/divide a positive integer/ decimal by a power of 10</p> <p>Add /subtract numbers and decimals with same, and different, number of decimal places</p> <p>Multiply a number up to four-digits by a one or two-digit number or by a decimal up to 2dp</p> <p>Divide a number up to four-digits by a one or two-digit number and divide a decimal by an integer.</p> <p>Apply the order of operations correctly to multi-step calculations involving up to four operations and brackets</p>	<p>Fluently recall multiplication facts up to <math>12 \times 12</math></p> <p>Fluently apply multiplication facts when carrying out division</p> <p>Know the formal written method of long multiplication</p> <p>Know the formal written method of short division</p> <p>Know the formal written method of long division</p> <p>Convert between an improper fraction and a mixed number</p>	<p>There will be a written piece of homework each week to reinforce key concepts.</p>



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<p>Checking, approximating and estimating</p>	<p>To be able to round numbers and measures to an appropriate degree of accuracy</p> <p>To be able to estimate answers; check calculations using approximation and estimation</p> <p>To be able to recognise and use relationships between operations, including inverse operations</p>	<p>Approximate</p> <p>Round</p> <p>Decimal place</p> <p>Check</p> <p>Solution</p> <p>Estimate</p> <p>Accuracy</p> <p>Significant figure</p>	<p>Round a number to a specified number of decimal places</p> <p>Round a number to a specified number of significant figures</p> <p>Estimate calculations by rounding numbers to one significant figure</p>	<p>Approximate any number by rounding to the nearest 10, 100 or 1000, 10 000, 100 000 or 1 000 000</p> <p>Approximate any number with one or two decimal places by rounding to the nearest whole number</p> <p>Approximate any number with two decimal places by rounding to one decimal place</p>	<p>There will be a written piece of homework each week to reinforce key concepts.</p>
<p>Counting and comparing</p>	<p>To be able to order positive and negative integers, decimals and fractions</p> <p>To be able to use the symbols =, ≠, &lt;, &gt;, ≤, ≥</p>	<p>Positive number</p> <p>Negative number</p> <p>Integer</p> <p>Numerator</p> <p>Denominator</p> <p>Mixed number</p> <p>Improper fraction</p>	<p>Use the signs &lt;, &gt; and = to compare numbers</p> <p>Order a set of integers and decimals</p> <p>Order fractions with the same denominator or denominators that are a multiple of each other</p> <p>Order fractions where the denominators are not multiples of each other</p> <p>Order a combination of integers, decimals, fractions and mixed numbers</p>	<p>Understand that negative numbers are numbers less than zero</p> <p>Order a set of decimals with a mixed number of decimal places (up to a maximum of three)</p> <p>Order fractions where the numerator is greater than 1</p> <p>Know how to simplify a fraction by cancelling common factors</p>	<p>There will be a written piece of homework each week to reinforce key concepts.</p>



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Visualising and constructing	<p>To be able to use conventional terms and notations: points, lines, vertices, edges, planes, parallel lines, perpendicular lines, right angles, polygons</p> <p>To be able to use the standard conventions for labelling and referring to the sides and angles of triangles</p>	<p>Edge Face Vertex (Vertices) Parallel Perpendicular Regular polygon Rotational symmetry</p>	<p>Understand and use labelling notation for parallel and perpendicular lines</p> <p>Identify line and rotational symmetry in polygons</p> <p>Use ruler and protractor to construct triangles, and other shapes, from written descriptions</p>	<p>Use a ruler to measure and draw lengths to the nearest millimetre</p> <p>Use a protractor to measure and draw angles to the nearest degree</p>	<p>There will be a written piece of homework each week to reinforce key concepts.</p>