|  | Working Towards Yr 7 <br> Expected standards | Working towards Yr 7 <br> Expected standards Plus | Meeting Yr 7 Expected standards | Working above Y7 Standard | Working Well above Y7 standard |
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| Number | * Multiply and divide whole numbers by 10 and 100. <br> *Round positive whole numbers to the nearest 10 and 100 . <br> * Understand negative numbers <br> \& order them. <br> * Use standard column procedures to $+\&$ - whole numbers and decimals with up to 1 place. <br> * Multiply and divide 2 and 3 digit by 1 -digit whole numbers. <br> * Recognise multiples or factors. <br> *Know that squaring a number means multiply it by itself <br> *Use fraction notation to describe parts of shapes. <br> *Reduce a simple fraction to its simplest form. <br> *Begin to add \& subtract simple fractions, only those with common denominators or calculate simple fractions of quantities \& measurements | *Multiply and divide whole numbers by $10,100,1000$ \& explain the effect, compare and order decimals in different contexts \& units. <br> *Round positive whole numbers to the nearest 10,100 or 1000 \& decimals to the nearest whole number. <br> *Understand negative numbers, order them and perform simple calculations involving negative numbers. <br> *Use standard column procedures to add and subtract whole numbers and decimals with up to two places and interpret different contexts. *Multiply and divide three-digit by two-digit whole numbers. Multiply and divide decimals by single-digit whole numbers. | *Recognise and use multiples and factors. <br> *Know the square numbers up to $10 \times 10$. <br> *Use fraction notation to describe parts of shapes and to express a smaller whole number as a fraction of a larger one. Use a diagram to compare two or more simple fractions. <br> *Reduce a fraction to its simplest form by cancelling common factors. <br> *Can add \& subtract simple fractions, only those with common denominators. Calculate simple fractions of quantities and measurements. <br> *Understand percentage as the 'number of parts per 100 <br> *Use understanding of place value to multiply and divide whole numbers and decimals by 10,100 and 1000 and explain the effect. *Use known facts, place value, knowledge of operations and brackets to calculate including using all four operations with decimals to two places. <br> *Apply inverse operations and approximate to check answers to problems are of the correct magnitude. <br> *Understand and use an appropriate non-calculator method for solving problems that involve multiplying and dividing any threedigit number by any two-digit number. | *Use squares, positive \& negative square roots, cubes \& cube roots, and index notation for small positive integer powers. Use index notation for integer powers and simple instances of the index laws. *Recognise and use number patterns and relationships eg. multiples, factors, primes. Including set theory, using Venn diagrams: appreciate the infinite nature of the sets of integers, real and rational numbers. <br> *Reduce a fraction to its simplest form by cancelling common factors. <br> * Add and subtract fractions that have a common denominator, including mixed numbers. <br> *Use a calculator where appropriate to calculate fractions/percentages of quantities/measurements. <br> *Round decimals to the nearest decimal place; order, subtract and add negative numbers in context. *Simple fraction decimal conversion | *Rounding to decimal places \& significant figures. <br> *Order integers, decimals and fractions <br> *Add, subtract, multiply and divide negative numbers. <br> *Hierarchy of operations (BIDMAS). <br> *Using functions, interpret the reverse process as the 'inverse function'. <br> *Laws of indices. <br> *Able to change ordinary numbers to standard form \& vice versa. <br> *Able to find Multiples, Factors \& Primes. <br> *Add/Subtract/Multiply/Divide fractions w/out a calculator. <br> *Percentage increase \& decrease <br> *Compound Interest \& depreciation <br> *Calculate reverse percentages <br> *Can calculate one quantity as <br> a percentage of another. <br> *Work interchangeably with terminating decimals and their corresponding fractions. |


| Ratio and Proportion and Rates of Change | *Use ratio notation. <br> * Recognise simple number patterns and relationships | *Use ratio notation, reduce a ratio to its simplest form. <br> *Recognise and use simple number patterns and relationships <br> *Understand simple ratio, consolidate understanding of the relationship between ratio and proportion. | *Reduce a ratio to its simplest form, including a ratio expressed in different units, recognising links with fraction and notation *Divide a quantity into two or more parts in a given ratio; use the unitary method to solve simple word problems involving ratio and direct proportion. | *Solve simple problems involving ratio and direct proportion. <br> *Use equivalence between fractions and order fractions and decimals | *Solving problems involving Distance, Speed and Time. <br> *Solving problems involving Direct Proportion \& Best Buys. |
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| Algebra | *Describe simple integer sequences. <br> *Know the meanings of term, expression or equation. <br> *Begin to be able to simplify linear algebraic expressions by collecting positive like terms. <br> *Express and solve simple functions in words | *Describe simple integer sequences, generate terms of a simple sequence given a rule and practical contexts. <br> *Know the meanings of term, expression and equation. *Simplify linear algebraic expressions by collecting positive like terms | *Express and solve simple functions in words, then using symbols; represent them in mappings. <br> *Use and interpret conventions/ notation for 2-D coordinates in the first quadrant <br> *Generate terms of a sequence using term-to-term and position-toterm definitions of the sequence. *Construct, express in symbolic form, and use simple formulae involving one or two operations. | *Substitute integers into formulae. <br> *Simplify and transform linear expressions by collecting like terms. *Multiply a single bracket. *Construct \& solve simple linear equations with integer coefficients. <br> *Begin to use graphs and set up equations to solve simple problems involving direct proportion. <br> *Use and interpret Coordinates in all four quadrants. | *Substitute into formulae \& expressions, incl. scientific formulae. <br> *Change of subject for simple formulae. <br> *Expand double brackets. <br> *Factorise simple algebraic expressions. <br> *Construct \& solve linear equations. <br> *Understand and use the concepts and vocabulary of identities \& inequalities. <br> *Able to draw Linear Graphs by plotting. <br> *Know the difference between an equation and an identity. |
| Geometry and Measures | *Identify a line of symmetry of a 2-D shape. <br> *Is able to find the perimeter and area of a rectangle by counting. <br> *Is able to identify coordinates in the first quadrant <br> *Is beginning to be able to read simple scales. <br> *Can recognise and know the names of triangles. <br> *Identify parallel lines; know the sum of angles at a point or on a straight line or in a triangle. <br> *Is beginning to be able to use a protractor. | *Identify all the symmetries of 2- <br> D shapes. <br> *Reflect simple shapes in a mirror line. <br> *Know and use the formula for the perimeter and area of a rectangle. <br> *Read and interpret simple scales on a range of measuring instruments. <br> *Use vocabulary, notation \& labelling conventions for lines, the sides \& angles of triangles \& other shapes. | *Identify parallel lines; know the sum of angles at a point, on a straight line and in a triangle. <br> *Use a protractor to measure acute angles. <br> *Use a wider range of properties of 2-D and 3-D shapes and identify all the symmetries of 2-D shapes. <br> *Reason about position and movement and transform shapes. *Understand and use the formula for the area of a rectangle and distinguish area from perimeter. | *Read and interpret scales on a range of measuring instruments, including protractor, explaining what each labelled division represents. <br> *Solve problems involving the conversion of units and make sensible estimates of a range of measures in relation to everyday situations. <br> *Use language associated with angle and know and use the angle sum of a triangle and that of angles at a point. Begin to recognise alternate and corresponding angles. <br> *Measure and draw angles to the nearest degree, when constructing models and drawing or using shapes. | *Able to perform translations, reflections, rotations \& simple enlargements <br> *Calculate area of Triangles and parallelograms. <br> *Circumference and Area of a Circle. <br> *Measure line segments and angles in geometric figures, including interpreting maps, scale drawings \& use of bearings. <br> *Calculate interior \& exterior angles in polygons. |


| Statistics and | *Is able to construct tally charts <br> for discrete data. <br> Frobability <br> or range for discrete data. | *Ask questions, plan how to <br>  <br> organise the data required, using <br> a simple data collection sheet. <br> Construct tally charts for discrete <br> data. | *Find the mode, mean, median and <br> range for discrete data and the <br> modal class for grouped data. | *Understand and use the mean of <br> discrete data and compare two <br> simple distributions, using the <br> range and one of mode, median or <br> mean. | *Interpret and construct <br> vertical line charts for <br> ungrouped discrete numerical <br> data. <br> *Use appropriate measures of <br> central tendency \& spread <br> (range). <br> *Interpret and construct line <br> graphs for time series data and <br> know their appropriate use. <br> *Interpret, analyse and <br> compare the distributions of <br> data sets through appropriate <br> graphical representation <br> involving discrete, continuous <br> and grouped data, including <br> box plots |
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