

WEEK 1	OBJECTIVES	SUPPORT FOR LEARNING / GUIDANCE
Fractions, decimals and percentages	<ul style="list-style-type: none"> • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions greater than 1 <ul style="list-style-type: none"> • Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] • Recall and use equivalences between simple fractions, decimals and percentages including in different contexts 	<p><i>Pupils use their understanding of the relationship between unit fractions and division to work backwards by multiplying a quantity that represents a unit fraction to find the whole quantity (for example, if a 1/4 of a length is 36cm, then the whole length is $36 \times 4 = 144\text{cm}$).</i></p> <p><i>They practise calculations with simple fractions and decimal fraction equivalents to aid fluency, including listing equivalent fractions to identify fractions with common denominators.</i></p> <p><i>Pupils can explore and make conjectures about converting a simple fraction to a decimal fraction (for example, $3 \div 8 = 0.375$). For simple fractions with recurring decimal equivalents, pupils learn about rounding the decimal to three decimal places, or other appropriate approximations depending on the context.</i></p> <p><i>Use a variety of images to support understanding including bar modelling, string etc</i> NRICH Andy's marbles NRICH Would you rather? NRICH Forgot the Numbers</p>
WEEK 2	OBJECTIVES	SUPPORT FOR LEARNING / GUIDANCE
Multiplying and dividing fractions	<ul style="list-style-type: none"> • Multiply simple pairs of proper fractions, writing the answer in its simplest form eg $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ • Divide proper fractions by whole numbers eg $\frac{1}{3} \div 2 = \frac{1}{6}$ • Solve problems which require answers to be rounded to specified degrees of accuracy 	<p><i>Pupils should use a variety of images to support their understanding of multiplication with fractions. This follows earlier work about fractions as operators (fractions of), as numbers, and as equal parts of objects, for example as parts of a rectangle.</i></p>
WEEK 3	OBJECTIVES	SUPPORT FOR LEARNING / GUIDANCE
Ratio and proportion	<ul style="list-style-type: none"> • Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • Solve problems involving similar shapes where the scale factor is known or can be found • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples 	<p><i>Pupils should consolidate their understanding of ratio when comparing quantities, sizes and scale drawings by solving a variety of problems. They might use the notation a:b to record their work.</i></p> <p><i>Pupils recognise proportionality in contexts when the relations between quantities are in the same ratio (for example, similar shapes and recipes)</i></p> <p><i>Pupils solve problems involving unequal quantities, for example, 'for every egg you need three spoonfuls of</i></p>

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		<p><i>flour', '3/5 of the class are boys'. These problems are the foundation for later formal approaches to ratio and proportion</i></p> <p>NRICH Orange drink NRICH Pumpkin Pie</p>

WEEK 4	OBJECTIVES	SUPPORT FOR LEARNING / GUIDANCE
<p>Co-ordinates translation and reflection</p>	<ul style="list-style-type: none"> Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes 	<p><i>Pupils draw and label a pair of axes in all four quadrants with equal scaling. This extends their knowledge of one quadrant to all four quadrants, including the use of negative numbers.</i></p> <p><i>Pupils draw and label rectangles (including squares), parallelograms and rhombuses, specified by coordinates in the four quadrants, predicting missing coordinates using the properties of shapes. These might be expressed algebraically for example, translating vertex (a,b) to (a-2, b +3); (a,b) and (a +d, b +d) being opposite vertices of a square of side d.</i></p> <p><i>Link to properties of shape.</i></p> <p>NRICH A Cartesian Puzzle NRICH Eight Hidden Squares NRICH Coordinate Tan NRICH Ten Hidden Squares</p>

WEEKS 5 and 6	OBJECTIVES	SUPPORT FOR LEARNING / GUIDANCE
<p>Statistics and measurement</p>	<ul style="list-style-type: none"> Interpret and construct pie charts and line graphs and use these to solve problems Solve problems using the calculation of percentages Calculate and interpret the mean as an average Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places Convert between miles and kilometres 	<p><i>Pupils connect their work on angles, fractions and percentages to the interpretation of pie charts.</i></p> <p><i>Pupils link percentages/fractions or 360 degrees to calculating angles of a pie chart. This could be linked to time periods on a clock.</i></p> <p><i>Pupils connect conversion (for example, from kilometres to miles) to a graphical representation as preparation for understanding linear/proportion graphs.</i></p> <p><i>Pupils know when it is appropriate to find the mean of a data set.</i></p> <p><i>Pupils both encounter and draw graphs relating two variables, arising from their own enquiry and other subjects.</i></p> <p><i>They know approximate conversions and are able to tell if an answer is sensible.</i></p>

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		<p><i>Pupils could be introduced to compound units for speed, such as miles per hour, and apply their knowledge in science or other subjects as appropriate.</i></p> <p><i>NB Upper KS2 PoS – Working scientifically Pupils should record data and results of increasingly complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar charts and line graphs.</i></p> <p><i>NRICH It's a Tie</i> <i>NRICH Match the Matches</i></p>