## Autumn

|  | Week 1 | Week 3 Week 4 | Week 5 | Week 6 |
| :---: | :---: | :---: | :---: | :---: |
|  | Place Value: | Addition and Subtraction | Multiplication and Division | Statistics |
| ? | Place value consecutive integer ascending descending million 7-digit power of linear sequence rounding nearest estimate landmark on a number line | Addition subtraction increase column addition/subtraction formal method regroup rounding check inverse accurate accuracy operation efficient add make sum altogether subtract minus take away less missing value multi-step relationship bar model part-whole | Multiple factor factor pairs common factor prime number prime factors composite number complement | Count tally sort survey questionnaire data graph represent group label title axis axes diagram continuous interpret category(ies) scale |
| 告 | Read and Write numbers to 1,000,000 |  |  |  |
|  | $\rightarrow$ Count forwards and back in steps of 10, 100 from any given number. <br> $\rightarrow$ Read, write, order and compare numbers beyond 1000. <br> $\rightarrow$ Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones). <br> $\rightarrow$ Find $\mathbf{1 0 0 0}$ more or less than a given number. <br> $\rightarrow$ Use the vocabulary of comparing and ordering numbers including use of $>$, < symbols and = sign. <br> $\rightarrow$ Identify, represent and estimate numbers using different representations including measures. <br> $\rightarrow$ Round any number to the nearest $\mathbf{1 0}, \mathbf{1 0 0}$ or $\mathbf{1 0 0 0}$. <br> $\rightarrow$ Connect estimation and rounding of numbers to the use of measuring instruments. | $\rightarrow$ Continue to practise using known facts and understanding of place value to quickly derive sums and differences using whole numbers and decimals <br> $\rightarrow$ Continue to practise mental methods with increasingly large numbers e.g. Use place value and known facts to add or subtract one near multiple of 100 from another e.g. $602-498$ or $535+399$. <br> $\rightarrow$ Use and explain a range of mental strategies appropriate to the numbers involved, sometimes supporting explanations with jottings or informal recording. <br> $\rightarrow$ Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. <br> $\rightarrow$ Estimate and use inverse operations to check answers to a calculation. <br> $\rightarrow$ Understand and use the relationships between the four operations and the principles of the arithmetic laws; commutative, associative and distributive. <br> $\rightarrow$ Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. <br> $\rightarrow$ Apply understanding of number operations to solve number puzzles and non-routine problems and explain reasoning. <br> $\rightarrow$ Use and explain the equals sign to indicate equivalence, including in missing number problems (e.g. $13+24=12+25 ; 33=55-\Delta$ ). | $\rightarrow$ Recall multiplication and division facts for multiplication tables up to $12 \times 12$. <br> $\rightarrow$ Relate multiplication and division to arrays and explore partitioning arrays in different ways to show relationships between number facts. $\rightarrow$ Use place value, known and derived facts to multiply and divide mentally (e.g. $600 \div 3=200$ can be derived from $2 \times 3=6$ ), including multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers. <br> $\rightarrow$ Recognise and use factor pairs and commutativity in mental calculations. <br> $\rightarrow$ Understand and use the relationships between the four operations and the principles of the arithmetic laws; commutative, associative and distributive. <br> $\rightarrow$ Use rounding, estimation and inverse operations to check answers to calculations and determine, in the context of a problem, levels of accuracy. <br> $\rightarrow$ Apply understanding of number operations to solve number puzzles, routine and non -routine problems and explain reasoning. <br> $\rightarrow$ Use and explain the equals sign to indicate equivalence, including in missing number problems (e.g. $2 \times 24=12 \times 4 ; 33=5 \times 0$ ). | $\rightarrow$ Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. <br> $\rightarrow$ Pose questions that can be answered using information presented in different graphs charts and tables. <br> $\rightarrow$ Understand and use Venn and Carroll diagrams to support reasoning about numbers or shape. <br> $\rightarrow$ Apply the skills of collecting, representing and interpreting statistical data across the curriculum within and beyond mathematic, sometimes in response to an enquiry of interest to and suggested by pupils. <br> $\rightarrow$ Solve calculation problems including using information from a range of tables and charts <br> $\rightarrow$ Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. <br> $\rightarrow$ Begin to relate the graphical representation of data to recording change over time. <br> $\rightarrow$ Understand and use a greater range of scales in representations. |
| y | $\rightarrow$ Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. <br> $\rightarrow$ Count forwards or backwards in steps of powers of 10 for any given number up to 1000000 . <br> $\rightarrow$ Round any number up to 1000000 to the nearest 10,100 , 1000,10000 and 100000. <br> $\rightarrow$ Solve number problems and practical problems that involve all of the above. | $\rightarrow$ Add and subtract numbers mentally with increasingly large numbers. <br> $\rightarrow$ Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). <br> $\rightarrow$ Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. <br> $\rightarrow$ Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | $\rightarrow$ Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers. <br> $\rightarrow$ Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. <br> $\rightarrow$ Establish whether a number up to 100 is prime andrecall prime numbers up to 19 . | $\begin{aligned} & \text { Colve comparison, sum and difference problems using } \\ & \text { information presented in a line graph. } \\ & \rightarrow \text { Complete, read and interpret information in tables } \\ & \text { including timetables. } \end{aligned}$ |
| 号 | $\Rightarrow$ Roman numerals to 1,000 <br> $\rightarrow$ Number to 10,000. $\rightarrow$ Number to 100,000. <br> $\rightarrow$ Numbers to 1,000,000 <br> $\rightarrow$ Read and write numbers to $1,000,000$ <br> $\rightarrow$ Powers of $10 \rightarrow 10,100,1000,10000,100000$ more/less <br> $\rightarrow$ Partition numbers $\rightarrow$ Number line to 1,000,000 <br> $\rightarrow$ Compare and order numbers to 100,000 <br> $\rightarrow$ Compare and order numbers to $1,000,000$ <br> Rounding to the nearest 10. <br> Rounding to the nearest 100. <br> $\rightarrow$ Round to the nearest 10,100 and 1000. <br> $\rightarrow$ Round numbers within 100,000. <br> 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next <br> multiple of 1,000 and 100 , and rounding to the nearest of each. | ```\(\Rightarrow\) mental strategies Add two 4-digit numbers - one exchange Add two 4-digit numbers - more than one exchange. \(\rightarrow\) Add whole numbers with more than four digits Subtract two 4-digit numbers - one exchange à Subtract two 4 -digit numbers \(\rightarrow\) Subtract whole numbers with more than four digits (column method). \(\rightarrow\) Round to check answers \(\rightarrow\) Round to estimate and approximate. \(\rightarrow\) Inverse operations (addition and subtraction). \(\rightarrow\) Multi-step addition and subtraction problems. - Compare calculations \(\rightarrow\) Find missing numbers``` | 5NF-1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice. <br> 5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors <br> $\rightarrow$ Multiples. <br> - Common multiples <br> $\rightarrow$ Factors. <br> $\rightarrow$ Common factors. <br> $\rightarrow$ Prime numbers. | à Interpret charts à Comparison, sum and difference à Introduce line graphs $\rightarrow$ Read and interpret line graphs. $\rightarrow$ Draw line graphs. $\rightarrow$ Use line graphs to solve problems. $\rightarrow$ Read and interpret tables. |

## Autumn

|  | Week 7 Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Multiplication and Division | Fractions | Perimeter and Area | Properties of Shape | Position and Direction |
| 20 $\frac{10}{10}$ 0 0 0 0 0 | Square ${ }^{2}$ squared cube ${ }^{3}$ cubed product place value multiply groups of division grouping sharing multiplication/division fact inverse | Equivalent fraction tenths hundreds decimal improper mixed number numerator denominator convert | Composite rectilinear perimeter calculate area length width formula standard unit square(d) $\mathrm{mm} / \mathrm{cm} / \mathrm{m}^{2}$ estimate regular irregular | Deduce properties regular irregular polygon angle degrees ${ }^{\circ}$ acute obtuse reflex right angle parallel perpendicular protractor angle measurer | Position direction coordinate quadrant axis/axes translate translation reflection symmetry |
| 号 | Round within 1,000,000 to the nearest 10, 100 or 1000 |  |  |  |  |
| co <br> 0 <br> $\frac{0}{01}$ <br> 0 <br> 0 <br> 0 <br> 0 | $\rightarrow$ Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. <br> $\rightarrow$ Solve one and two step problems in contexts involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects e.g. the number of choices on a menu or three cakes shared equally between 10 children. <br> $\rightarrow$ Multiply two-digit and three-digit numbers by a one-digit number using formal written layout of short multiplication. <br> $\rightarrow$ Use the formal written method of short division for <br> calculations involving two and three digit numbers divided by a single digit with exact answers. | $\mid \rightarrow$ Recognise and show, using diagrams, families of common equivalent fractions. <br> $\rightarrow$ Use factors and multiples to recognise equivalent fractions and simplify where appropriate e.g. $6 / 9=2 / 3$ or $1 / 4$ $=2 / 8$. <br> $\rightarrow$ Make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. <br> $\rightarrow$ Extend use of the number line to connect fractions, numbers and measures. <br> $\rightarrow$ Count forwards and back using simple fractions and decimals. <br> $\rightarrow$ Count up and down in tenths and hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. | $\rightarrow$ Continue to use read and write standard metric units and their abbreviations, developing fluency in /heir relationships. <br> $\rightarrow$ Suggest suitable units and equipment for measuring and read scales to an appropriate degree of accuracy. <br> $\rightarrow$ Measure and calculate the perimeter of a rectilinear figure, including squares, in centimetres and metres. <br> $\rightarrow$ Find the area of rectilinear shapes by counting squares. <br> Relate area to arrays and multiplication. <br> $\rightarrow$ Make and explain connections between number, measures and shape. | $\rightarrow$ Compare and classify geometric shapes, including quadrilaterals e.g. parallelogram, rhombus, trapezium and triangles e.g. isosceles, equilateral, scalene, based on their properties and sizes <br> $\rightarrow$ Identify acute and obtuse angles and compare and order angles up to two right angles by size in preparation for using a protractor. <br> $\rightarrow$ Compare lengths and angles to decide if a polygon is regular or irregular. | $\rightarrow$ Identify lines of symmetry in 2-D shapes presented in different orientations. <br> $\rightarrow$ Complete a simple symmetric figure with respect to a specific line of symmetry. <br> $\rightarrow$ Draw a pair of axes in one quadrant, with equal scales and integer labels. <br> $\rightarrow$ Read, write and use pairs of coordinates to describe positions on a 2-D grid as coordinates in the first quadrant. <br> $\rightarrow$ Use co-ordinate plotting ICT tools. Describe movements between positions as translations of a given unit to the left/right and up/down. <br> $\rightarrow$ Plot specified points and draw sides to complete given polygon <br> $\rightarrow$ Recognise and use the eight compass directions |
| 4 0 0 | $\rightarrow$ Multiply and divide numbers mentally, drawing upon known facts. <br> 5NF-1 Secure fluency in multiplication table facts, and corresponding <br> division facts, through continued practice. <br> $\rightarrow$ Recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ( ${ }^{3}$ ). <br> $\rightarrow$ Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes. <br> $\rightarrow$ Multiply and divide whole numbers and those involving decimals by 10 , 100 and 1,000. <br> $\rightarrow$ Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. | $\rightarrow$ Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. $5 \mathrm{~F}-2$ Find equivalent fractions and understand that they have the same value and the same position in the linear number system. <br> $\rightarrow$ Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $>1$ as a mixed number [for example $2 / 5+4 / 5=6 / 5=$ $11 / 5$ ]. | $\rightarrow$ Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. <br> $\rightarrow$ Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres ( $\mathrm{cm}^{2}$ ) and square metres $\left(\mathrm{m}^{2}\right)$, and estimate the area of irregular shapes. | $\rightarrow$ Use the properties of rectangles to deduce related facts and find missing lengths and angles. <br> $\rightarrow$ Distinguish between regular and irregular gpolygons based on reasoning about equal sides and angles. <br> $\rightarrow$ Know angles are measured in degrees: estimate and compare acute, obtuse and reflexangles. <br> $\rightarrow$ Draw given angles, and measure them in degrees. | $\rightarrow$ Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. |
|  | $\rightarrow$ Multiply by 10 <br> 5MD-1 Multiply and divide numbers by 10 and 100 ; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. <br> $\rightarrow$ Multiply by 100 <br> $\rightarrow$ Multiplying by 10,100 and 1000. <br> $\rightarrow$ Dividing by 10,100 and 1000 . <br> $\rightarrow$ Multiples of 10,100 and 1000 . <br> $\rightarrow$ Multiply 2 -digits by 1 -digit <br> 5 MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. $\rightarrow$ Multiply 3-digits by 1-digit $\rightarrow$ Multiply 4-digits by 1-digit | $\rightarrow$ What is a fraction? <br> $\rightarrow$ Equivalent fractions <br> $5 \mathrm{~F}-2$ Find equivalent fractions and understand that they have the same value and the same position in the linear number system. <br> $\rightarrow$ Find fractions equivalent to a unit fraction. <br> $\rightarrow$ Find fractions equivalent to non-unit fraction. <br> $\rightarrow$ Fractions greater than 1 . <br> $\rightarrow$ Conver Improper fractions to mixed numbers. <br> $\rightarrow$ ConvertMixed numbers to improperfractions. <br> $\rightarrow$ Number sequences. | $\rightarrow$ Measure perimeter. <br> $\rightarrow$ Perimeter on a grid <br> $\rightarrow$ Perimeter of rectangles <br> $\rightarrow$ Perimeter of rectilinear shapes <br> $\rightarrow$ Calculate perimeter. <br> $\rightarrow$ Counting squares <br> $\rightarrow$ Area of rectangles. <br> $5 \mathrm{G}-2$ Compare areas and calculate the area of rectangles (including squares) using standard units. | $\rightarrow$ Identifying angles <br> $\rightarrow$ Compare and order angles <br> 5G-1 Compare angles, estimate and measure angles in degrees ( ${ }^{\circ}$ ) and draw <br> angles of a given size. <br> $\rightarrow$ Measuring angles in degrees. <br> $\rightarrow$ Measuring with a protractor (1). <br> $\rightarrow$ Measuring with a protractor (2). <br> $\rightarrow$ Drawing lines and angles accurately. | $\rightarrow$ Describe position <br> $\rightarrow$ Draw on a grid <br> $\rightarrow$ Position in the first quadrant. <br> $\rightarrow$ Lines of symmetry <br> $\rightarrow$ Complete a symmetric figure. <br> $\rightarrow$ Reflection. <br> $\rightarrow$ Reflection with coordinates. <br> $\rightarrow$ Translation. <br> $\rightarrow$ Translation with coordinates. |

Spring

|  | Week 1 | Week 2 | Week 3 | Week $4 \times$ Week 5 | Week 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Place Value: | Conversions | Fractions | Multiplication and Division | Fractions |
| $\begin{aligned} & \frac{2}{6} \\ & \frac{10}{5} \\ & 0 \end{aligned}$ | Place value next consecutive integer ascending descending million 7-digit power of linear sequence rounding nearest estimate landmark on a number line negative integer positive minus above/below zero | Convert conversion metric measure kmm cmm cmmm gkg Iml common imperial units inches pounds pints unit of measurement approximate equivalence | Equivalent fraction tenths hundreds decimal improper mixed number numerator denominator convert common denominator common multiple simplify | Multiply divide product place value multiply groups of division grouping sharing multiplication/division fact inverse remainder interpret long multiplication | Equivalent fraction tenths hundreds decimal improper mixed number numerator denominator convert common denominator common multiple simplify |

Identify multiples and factors up to $12 \times 12$

| 5 <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 | $\rightarrow$ Interpret negative numbers in context and count <br> backwards through zero to include negative numbers. <br> $\rightarrow$ Round decimals with one decimal place to the nearest whole number. <br> $\rightarrow$ Use rounding, estimation and inverse operations to check answers to calculations and determine, in the context of a problem, levels of accuracy. <br> $\rightarrow$ Apply understanding of the number system to solve number and practical problems and puzzles involving increasingly large positive numbers, money or measures. Explain methods and reasoning orally and in writing, including using diagrams and symbols. | $\rightarrow$ Convert between units of measure e.g. kilometre to metre; hour to minute using multiplication. $\rightarrow$ Use all four operations to solve problems including scaling problems involving measure (e.g. length, mass, volume, money) and using decimal notation where appropriate. Information required to solve a problem is often drawn from tables, including timetables, graphs and charts. | $\rightarrow$ Compare and order fractions <br> $\rightarrow$ Add and subtract fractions with the same denominator practising through increasingly complex problems beyond one whole |
| :---: | :---: | :---: | :---: |
| 20 | $\rightarrow$ interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. <br> $\rightarrow$ Solve number problems and practical problems that involve all of the above. | $\rightarrow$ Convert between different units of metric measure [for example, km and $\mathrm{m} ; \mathrm{cm}$ and $\mathrm{m} ; \mathrm{cm}$ and $\mathrm{mm} ; \mathrm{g}$ and $\mathrm{kg} ; \mathrm{I}$ and ml ]. <br> $\rightarrow$ Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. | $\rightarrow$ Compare and order fractions whose denominators are multiples of the same number. <br> $\rightarrow$ Add and subtract fractions with the same denominator and denominators that are multiples of the same number. |
|  | 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the hearest of each. <br> $\rightarrow$ Round within a million. | ```5NPV-5 Convert between units of measure, including using common decimals and fractions. \(\rightarrow\) Kilometres \(\rightarrow\) Kilograms and kilometres. \(\rightarrow\) Milligrams and millilitres. \(\rightarrow\) Metric units. \(\rightarrow\) Imperial units.``` | $\Rightarrow$ Compare fractions less than 1. <br> - Order fractions less than 1 <br> - Compare and order fractions greater than 1. <br> $\rightarrow$ Add and subtract fractions with the same <br> denominator. <br> $\rightarrow$ Add fractions within 1. |


| $\rightarrow$ Multiply two-digit and three-digit numbers by a one-digit | asee previous |
| :--- | :--- |
| number using formal written layout of short multiplication. |  |
| $\rightarrow$ Use the formal written method of short division for |  |
| calculations involving two and three digit numbers divided by a single |  |
| digit with exact answers. |  |

## Spring

|  | Week 7 Week 8 | Week 9 | Week 10 Week 11 | Week 12 |
| :---: | :---: | :---: | :---: | :---: |
|  | Fractions | Perimeter and Area | Fractions | Statistics |
|  | Equivalent fraction tenths hundreds decimal improper mixed number numerator denominator convert common denominator common multiple simplify | Composite rectilinear compound perimeter calculate area length width formula standard unit square(d) $\mathrm{mm} / \mathrm{cm} / \mathrm{m}^{2}$ estimate regular irregular | Equivalent fraction tenths hundreds decimal improper mixed number numerator denominator convert common denominator common multiple simplify unit fractions non-unit integer operators | Count tally sort survey questionnaire data graph represent group label title axis axes diagram continuous interpret category(ies) scale timetables data handling |
| $\frac{\pi}{\frac{u}{x}}$ | Identify prime Numbers up to 50 |  |  |  |
|  | $\rightarrow$ See previous | $\rightarrow$ See previous | $\rightarrow$ Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. | $\rightarrow$ Continue to develop accuracy with telling the time and using the vocabulary of time. Compare durations of events including when expressed in different units e.g. 3.5 hours and 140 minutes. $\rightarrow$ Read, write and convert time between analogue and digital 12 - and 24 -hour clocks. <br> $\rightarrow$ Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. |
| $\left\lvert\, \begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}\right.$ | $\rightarrow$ Add and subtract fractions with the same denominator and denominators that are multiples of the same number. <br> $\rightarrow$ Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematicalstatements $>1$ as a mixed number [for example $2 / 5+4 / 5=6 / 5=11 / \mathrm{s}$ ]. | $\rightarrow$ Use the properties of rectangles to deduce related facts and find missing lengths and angles. <br> $\rightarrow$ Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. |  | $\rightarrow$ Solve comparison, sum and difference problems using information presented in a line graph. $\rightarrow$ Complete, read and interpret information in tables including timetables |
|  | $\rightarrow$ Subtract fractions. <br> $\rightarrow$ Subtract mixed numbers. <br> $\rightarrow$ Subtract - breaking the whole. <br> $\rightarrow$ Subtract 2 mixed numbers. | $\rightarrow$ Area of compound shapes. <br> G-2 Compare areas and calculate the area of rectangle <br> (including squares) using standard units. $->$ <br> $\rightarrow$ Area of irregular shapes | $\rightarrow$ Multiply unit fractions by an integer. $\rightarrow$ Multiply non-unit fractions by an integer. $\rightarrow$ Multiply mixed numbers by integers. $\rightarrow$ Calculate fraction of a quantity. $5 \mathrm{~F}-1$ Find non-unit fractions of quantities. $\rightarrow$ Fraction of an amount. $\rightarrow$ Using fractions as operators. | $\rightarrow$ Two way tables. $\rightarrow$ Timetables. |

Summer

|  | Week 1 | Week $2 \times$ Week 3 | Week 4 | Week 5 Week 6 |
| :---: | :---: | :---: | :---: | :---: |
|  | Place Value | Decimals and Percentages | Properties of Shape | Decimal |
| 20 | Roman numeral equal represent ascending descending million 7-digit power of linear sequence rounding nearest estimate landmark on a number line above/below zero | Decimal place decimal point tenths hundredths thousandths round rounded to... three decimal places percent $\%$ percentages convert equivalence as a fraction/decimal/percentage | Straight line full turn calculate deduce properties regular irregular polygon angle degrees ${ }^{\circ}$ acute obtuse reflex right angle parallel perpendicular protractor angle measurer | Decimal place decimal point tenths hundredths thousandths round rounded to... three decimal places percent $\%$ percentages convert equivalence as a fraction/decimal/percentage |
| $\begin{aligned} & \frac{\pi}{x} \\ & \frac{\pi}{x} \end{aligned}$ | I can recall square numbers up to 12 squared and their square root |  |  |  |
|  | $\rightarrow$ Read Roman numerals to $\mathbf{1 0 0}$ (I to C) and know that, over time, the numeral system changed to include the concept of zero and place value. Appreciate the difference between the Roman numeral system and our own number system from a place value viewpoint | $\rightarrow$ Recognise and write decimal equivalents to $1 / 4,1 / 2,3 / 4$. <br> $\rightarrow$ Recognise and write decimal equivalents of any number of tenths or hundredths. Round decimals with one decimal place to the nearest whole number. <br> $\rightarrow$ Compare and order numbers and quantities with the same number of decimal places up to two decimal places and represent them in several ways, such as on number lines. <br> $\rightarrow$ Estimate, compare, order and calculate different measures, including money in pounds and pence building on understanding of place value, decimal notation and knowledge of fractions. <br> $\rightarrow$ Apply understanding of fractions and decimals to solve routine and non-routine problems and puzzles involving numbers, shapes, money or measures. Explain methods and reasoning orally and in writing, including using diagrams and symbols | $\rightarrow$ Draw symmetric patterns using a variety of media to become familiar with different orientations of lines symmetry; and recognise line symmetry in a variety of diagrams including where the line of symmetry does not dissect the original shape. | asee previous |
| $\begin{aligned} & u \\ & 2 \\ & i n \end{aligned}$ | $\rightarrow$ Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. <br> $\rightarrow$ Revisit previous taught PV NC obj. | $\rightarrow$ Read, write, order and compare numbers with up tothree decimal places. $\rightarrow$ Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. <br> $\rightarrow$ Round decimals with two decimal places to the nearest whole number and to one decimal place. <br> $\rightarrow$ Solve problems involving number up to three decimal places. <br> $\rightarrow$ Recognise the per cent symbol (\%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100 , and as a decimal. | $\rightarrow$ Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. - Draw given angles, and measure them in degrees. ldentify: angles at a point and one whole turn (total $360^{\circ}$ ), angles at a point on a straight line and $1 / 2$ aturn (total $180^{\circ}$ ) other multiples of $90^{\circ}$. | $\rightarrow$ Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. <br> $\rightarrow$ Solve problems which require knowing percentage and decimal equivalents of $1 / 2,1 / 2,1 / 5,2 / 5,1 / 5$ and thosefractions with a denominator of a multiple of 10 or 25 . <br> $\rightarrow$ Solve problems involving number up to three decimal places. |
|  | $\rightarrow$ Roman numerals to 1,000 . <br> $\rightarrow$ previously covered P.V small steps | $\rightarrow$ Decimals up to 2 d.p. <br> $5 N P V-1$ Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01 . Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01 . <br> $\rightarrow$ Decimals as fractions (1). <br> 5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning. <br> $\rightarrow$ Decimals as fractions (2). <br> $5 F-3$ Recall decimal fraction equivalents for $1 / 2,1 / 1,1 / 10$ and $1 / 5$, and for multiples of these proper fractions. <br> $\rightarrow$ Understand thousandths. <br> $\rightarrow$ Thousands as decimals. <br> $\rightarrow$ Rounding decimals. <br> $\rightarrow$ Order and compare decimals. <br> $\rightarrow$ Understand percentages. <br> $\rightarrow$ Percentages as fractions and decimals. <br> $\rightarrow$ Equivalent F.D.P. | $\begin{aligned} & \text { 5G-1 Compare angles, estimate and measure } \\ & \text { angles in degrees ( }{ }^{\circ} \text { ) and draw angles of a given } \\ & \text { size. } \\ & \rightarrow \text { Calculating angles on a straight line. } \\ & \text { - Calculating angles around a point. } \\ & \text { - Triangles } \\ & \text { - Quadrilaterals } \\ & \rightarrow \text { Calculating lengths and angles in shapes. } \end{aligned}$ | $\rightarrow$ Adding decimals within 1. <br> $\rightarrow$ Subtracting decimals within 1 . <br> $\rightarrow$ Complements to 1 . <br> $\rightarrow$ Adding decimals - crossing the whole. <br> $\rightarrow$ Adding decimals with the same number of decimal places. <br> $\rightarrow$ Subtracting decimals with the same number of decimal places. <br> $\rightarrow$ Adding decimals with a different number of decimal places. <br> $\rightarrow$ Subtracting decimals with a different number of decimal places. |

## Summer

|  | Week 7 | Week 8 Week 9 | Week $10 \times$ Week 11 | Week 12 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Decimals | Properties of Shape | Volume |
| $\begin{aligned} & \text { Z } \\ & \frac{7}{0} \\ & \frac{0}{2} \\ & \frac{0}{8} \\ & 0 \\ & 8 \end{aligned}$ | Convert conversion metric measure km m cm $\mathrm{m} \mathrm{cm} \mathrm{mm} \mathrm{gkg} \mid \mathrm{ml}$ common imperial units inches pounds pints unit of measurement approximate equivalence | Decimal place decimal point tenths hundredths thousandths round rounded to... three decimal places percent $\%$ percentages convert equivalence as a fraction/decimal/percentage | Straight line fullturn calculate deduce properties regular irregular polygon angle degrees ${ }^{\circ}$ acute obtuse reflex right angle parallel perpendicular protractor angle measurer | Estimate capacity volume cubes cuboids $\mathrm{mm} / \mathrm{cm}^{2} / \mathrm{m}^{3}$ |
| $\begin{aligned} & \frac{\pi}{4} \\ & \frac{\pi}{x} \end{aligned}$ | Convert between improper and mixed fractions |  |  |  |
| ㅇ <br> $\frac{0}{0}$ <br> 0 <br> 0 <br> 0 <br> 0 <br> 0 | àSee previous | $\rightarrow$ Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. | $\rightarrow$ Continue to develop use of correct mathematical vocabulary(including parallel and perpendicular) to identify and describe 2-D and 3-D shapes. <br> $\rightarrow$ Continue to draw and make 2-D and 3-D shapes using a range of materials. <br> $\rightarrow$ Compare and classify geometric shapes, including quadrilaterals e.g. parallelogram, rhombus, trapezium and triangles e.g. isosceles, equilateral, scalene, based on their properties and sizes <br> $\rightarrow$ Apply measuring skills to an appropriate degree of accuracy, alongside the skills of thinking mathematically to solve problems. These should include practical problems and might involve construction of shapes or artefacts, often in a cross curricular context. | àSee previous |
| $\begin{aligned} & 0 \\ & 2 \\ & 10 \end{aligned}$ | $\rightarrow$ Solve problems involving converting between units of time. | ```->\mathrm{ Use all four operations to solve problems involving measure [for example,} length, mass, volume, money] using decimal notation, including scaling. \rightarrow \text { Solve problems involving number up to three decimal places.} ->Multiply and divide whole numbers and those involving decimals by 10,100 and 1000.``` | $\rightarrow$ Identify: angles at a point and one whole turn (total $360^{\circ}$ ), angles at a point on a straight line and $1 / 2$ a turn (total $180^{\circ}$ ) other multiples of $90^{\circ}$. $\rightarrow$ Use the properties of rectangles to deduce related facts and find missing lengths and angles. | $\rightarrow$ Estimate volume [for example using 1 cm 3 blocks to build cuboids (including cubes)] and capacity [for example, using water]. <br> $\rightarrow$ Use all four operations to solve problems involving measure. |
|  | $\rightarrow$ Converting units of time. <br> $\rightarrow$ Timetables. | $\rightarrow$ Adding and subtracting whole and decimals. <br> $5 \mathrm{NF}-2$ Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth). <br> $\rightarrow$ Decimal sequences. <br> $\rightarrow$ Multiplying decimals by 10,100 and 1000 . <br> $5 \mathrm{NPV}-1$ Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01 . Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01 . <br> $5 \mathrm{NPV}-2$ Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning. <br> $5 \mathrm{MD}-1$ Multiply and divide numbers by 10 and 100 ; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. <br> $\rightarrow$ Dividing decimals by 10,100 and 1,000 . | $\rightarrow$ Regular and irregular polygons. <br> $\rightarrow$ Reasoning about 3D shapes. | $\rightarrow$ What is volume? <br> $\rightarrow$ Compare volume. <br> $\rightarrow$ Estimate volume. <br> $\rightarrow$ Estimate capacity. |

