# Annual Curriculum Plan

## Maths

| | | Autumn | Spring | Summer |
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| | N | Daily whole class maths sessions<br>Nursery rhymes during circle times (puppets)<br>Daily book choice – comparison of height, counting, more, less than<br>Enhancements in the classroom linked to topics<br><br>Develop recognition of up to 2 objects without having to count<br>Reciting numbers up to 3<br>Say one number for each item in order: 1,2,3<br>Show some finger numbers<br>Recognises some numerals and beginning to link them to amounts<br>Experiment with their own symbols and marks<br>Select shapes appropriately for tasks<br>Understand position through words alone<br>Make comparisons between objects relating to size<br>Talk about and identify patterns around them<br>Solve real-life mathematical problems with numbers up to 2 | Daily whole class maths sessions<br>Nursery rhymes during circle times (puppets)<br>Daily book choice – comparison of height, counting, more, less than<br>Enhancements in the classroom linked to topics<br><br>Develop recognition of up to 3 objects without having to count individually<br>Reciting numbers up to 5<br>Say one number for each item in order<br>Show some finger numbers<br>Recognise numerals to 3 and able to link them to amounts<br>Experiment with their own symbols and marks<br>Solve real life mathematical problems with numbers up to 3<br>Compare quantities "more than" and "fewer than"<br>Combines shapes to make new ones<br>Explore and talk about different 2D and 3D shapes<br>Discuss routes and locations<br>Make comparisons between objects relating to length/height<br>Extend and create ABAB patterns | Daily whole class maths sessions<br>Nursery rhymes during circle times (puppets)<br>Daily book choice – comparison of height, counting, more, less than<br>Enhancements in the classroom linked to topics<br><br>Develop recognition of up to 5 objects without having to count individually<br>Recite numbers up to 10<br>Say one number for each item in order<br>Show finger numbers up to 5<br>Know that the last number you counted tells you how many there are in total<br>Recognise numerals to 5 and able to link them to amounts<br>Experiment with their own symbols and marks<br>Solve real-life mathematical problems with numbers up to 5<br>Explore and talk about different 2D and 3 D shapes, using informal mathematical language<br>Describe a familiar route<br>Make comparisons between objects relating to weight/capacity<br>Notice and correct an error in a simple repeating pattern |

| | | | Begin to describe a sequence of events using words such as first, then. |
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| R | **'Just Like Me'**<br>Number<br>Match and sort numbers<br>Compare amounts<br><br>Measure , Shape and special thinking<br>Compare size , mass, & capacity<br>Exploring patern<br><br>**'It's me 1,2.3**<br>Number<br>Representing 1, 2, 3<br>Comparing 1, 2,3<br>Composition of 1,2,3<br><br>Measure , Shape and special thinking<br>Circles and triangles<br>Positional language<br><br>**'Light and dark'**<br>Number<br>Representing numbers to 5<br>One more or less<br><br>Measure , Shape and special thinking<br>Shapes with 4 sides<br>Time | **'Alive in 5'**<br>Number<br>Introducing zero<br>Comparing numbers to 5<br>Composition of 4&5<br><br>Measure , Shape and special thinking<br>Compare mass<br>Compare capacity<br><br>**'Growing 6,7,8'**<br>Number<br>6,7,8<br>Making pairs<br>Combining 2 groups<br><br>Measure , Shape and special thinking<br>Length & height<br>time<br><br>**'Building 9 and 10'**<br>Number<br>9&10<br>Comparing numbers to 10<br>Bonds tp 10<br><br>Measure , Shape and special thinking<br>3D shape<br>pattern | **'To 20 and beyond'**<br>Number<br>Building numbers beyond 10<br>Counting patterns beyond 10<br><br>Spatial reasoning<br>Spatial reasoning<br>Match, rotate, manipulate<br><br>**'first , then, now'**<br>Number<br>Adding more<br>Taking away<br><br>Spatial reasoning<br>Spatial reasoning<br>Compose and decompose<br><br>**'Find my pattern'**<br>Number<br>Doubling<br>Sharing and grouping<br>Even and odd<br><br>Spatial reasoning<br>Spatial reasoning<br>Visualise and build<br><br>**'On the move'**<br>Number<br>Deepening understanding<br>Patterns and relationships |

|  |  |  | Spatial reasoning<br>Spatial reasoning<br>mapping |
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| <u>Year 1</u> | **Place Value**<br>Sort, count and represent objects.<br>Count, read and write forwards from any number 0 to 10.<br>Count, read and writing backwards from any number 0 to 10.<br>Count one more and one less.<br>One to one correspondence to start to compare groups.<br>Compare groups using language such as equal, more/greater, less/fewer.<br>Introduce = , > and < symbols.<br>Compare numbers.<br>Order groups of objects.<br>Order numbers.<br>Ordinal numbers (1st, 2nd, 3rd ….).<br><br>**Addition and subtraction (within 10)**<br><br>Part whole model<br>Addition symbol..<br>Fact families –Addition facts.<br>Find number bonds for numbers within 10.<br>Compare number bonds.<br>Addition: Adding together.<br>Subtraction: Taking away<br>Subtraction: Finding the difference.<br>Comparing addition and subtraction statements<br>**Shape**<br><br>Recognise and name 3D shapes. | **Place Value**<br>Count to 50 forwards and backwards, beginning with 0 or 1, or from any number.<br>Count, read and write numbers to 50 in numerals.<br>Given a number, identify one more or one less.<br>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.<br>Count in multiples of twos, fives and tens.<br><br>**Addition and subtraction**<br>Represent and use number bonds and related subtraction facts within 20.<br>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.<br>Add and subtract one-digit and two-digit numbers to 20, including zero.<br>Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= ▢ –9.<br><br>**Measure**<br>Measurement: Length and Height Measure and begin to record lengths and heights.<br>Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half). | **Multiplication and division**<br>Count in multiples of twos, fives and tens.<br>Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.<br>**Fractions**<br>Recognise, find and name a half as one of two equal parts of an object, shape or quantity.<br>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.<br>Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)<br>Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].<br><br><br>**Position and direction** |

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| Sort 3D shapes.<br>Recognise and name 2D shapes.<br>Sort 2D shapes.<br>Patterns with 3D and 2D shapes. | Measurement: Weight and Volume Measure and begin to record mass/weight, capacity and volume.<br>Compare, describe and solve practical problems for mass/weight:[for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]. | Describe position, direction and movement, including whole, half, quarter and three quarter turns<br>**Place value to 100**<br>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.<br>  Count, read and write numbers to 100 in numerals.<br>Given a number, identify one more and one less.<br> Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.<br>**Money**<br>Recognise and know the value of different denominations of coins and notes.<br>**Time**<br>Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.<br>Recognise and use language relating to dates, including days of the week, weeks, months and years.<br>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.<br>Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]. |

| | | | Measure and begin to record time (hours, minutes, seconds). |
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| Year 2 | **Place Value (within 100)**<br>Count objects to 100 and read and write numbers in numerals and words.<br>Represent numbers to 100.<br>Tens and ones with a part whole model.<br>Tens and ones using addition.<br>Use a place value chart.<br>Compare and order objects and numbers.<br>Count in 2s, 3s, 5s and 10s.<br>Addition and subtraction<br>Fact families –Addition and subtraction bonds to 20.<br>Bonds to 100 (tens and ones).<br><br>**Add and subtract 1s, 10s.**<br>10 more and 10 less.<br>Add and subtract 10s.<br>Add a 2-digit and 1-digit number –crossing ten.<br>Subtract a 1-digit number from a 2-digit number –crossing 10.<br>Add two 2-digit numbers – crossing & not crossing ten.<br>Subtract a 2-digit number from a 2-digit number –crossing & not crossing ten.<br>Add three 1-digit numbers.<br>Measurement (Money)<br>Count money –pence/pounds/notes/coins.<br>Compare and select money.<br>Make the same amount.<br>Find the total, difference, change.<br>Two-step problems. | **Multiplication & Division**<br>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.<br>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals ($=$) signs.<br>How that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot.<br>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.<br><br>**Statistics**<br>Interpret and construct simple pictograms, tally charts, block diagrams and tables.<br>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity<br>Ask and answer questions about totalling and comparing categorical data.<br><br><br>**Properties of shapes** | **Position & Direction**<br>Order and arrange combinations of mathematical objects in patterns and sequences<br>Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).<br><br>**Time**<br>Compare and sequence intervals of time.<br>Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.<br>Know the number of minutes in an hour and the number of hours in a day.<br><br>**Mass, Capacity & Temperature**<br>Choose and use appropriate standard units to estimate and measure mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using scales, thermometers and measuring vessels. |

| | | Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.<br>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.<br>Identify 2-D shapes on the surface of 3-D shapes.<br>Compare and sort common 2-D and 3-D shapes and everyday objects.<br><br>**Fractions**<br>Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity.<br>Write simple fractions, for example 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.<br>**Measure- Length & Height**<br>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm to the nearest appropriate unit, using rulers etc.<br>Compare and order lengths and record the results using >, < and =. | Compare and order mass, volume/capacity and record the results using >, < and =. |
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| <u>Year 3</u> | **Place Value**<br>Up to 4 digit numbers<br>Partitioning<br>Ordering<br>Add 10 and 100<br>Counting in steps<br><br>**Addition and subtraction**<br>Add and subtract single digits mentally<br>Add and subtract mentally 10's ad 100's | **Addition and subtraction**<br>Missing number problems, using the inverse<br>Addition pyramids, to solve number puzzles involving addition and subtraction.<br><br>**Multiplication and division**<br>Recall 2,5, and 10 x tables<br>Multiplication facts of 3, 4 and 8<br>Multiplication of 2, 4 and 8 through doubling<br>Multiplying multiple of 10 | <u>Fractions</u><br><br>Equivalent fractions<br><br>Compare fractions<br><br>Order fractions<br><br>Add fractions |

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| | Word Problems<br>Using number facts to solve calculations<br>Written methods - Addition vertical sums<br>Revision including carrying across a ten / 100<br>Addition White Rose<br>Subtraction vertical sums<br>Revision including exchanging across a ten /100<br>Subtraction and addition White Rose<br><br>**Multiplication and division**<br>Recall multiplication facts 2.5 and 10 x<br>Equal groups and 3 x<br>4x table facts | Dividing multiples of 10<br>Written method of multiplication<br>Written method for division<br>Word problems<br>Reasoning and problem solving embedded through lessons<br>Recognizing fractions<br>Counting in tenths<br>Fractions of a number<br><br>**Shape and Space**<br><br>Perpendicular and parallel lines<br>Right Angles<br>Obtuse and acute angles<br>2d shapes and 3d shapes and their properties<br><br>Money- £ and p, converting £-p, adding money, subtracting money, Giving change<br><br>**Statistics**<br>Data Analysis - Pictograms<br>Bar charts, Tables<br><br>**Measure**<br><br>Length and perimeter<br>Measuring length, equivalent lengths, compare lengths, add lengths, subtract lengths, measure perimeter, calculate perimeter | Subtract fractions<br><br>Consolidation<br><br>**Shape and Space**<br>Properties of shape<br>Turns, position and direction<br>Recognise and describe 2D shapes,<br>Recognise and describe 3-D shapes,<br>Make 3-D shapes<br><br>**Measure**<br>Mass and Capacity<br>Measure mass, Compare mass, Add and subtract mass,<br>Measure capacity, Compare capacity, Add and subtract capacity<br>Time recap<br><br>**Statistics**<br>Data Analysis recap |
| Year 4 | **Place Value**<br>Place value up to 4 digits<br>Ordering numbers<br>Add subtract 100, 1000 | **Multiplication and Division:**<br>Recall known multiplication facts<br>Multiplying multiples of 10/100 | **Fractions:**<br>Adding/subtracting fractions<br>Equivalent fractions |

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| Counting on from given number<br>Roman numerals<br>Negative numbers<br> Rounding nearest 10,100,1000<br>Problem Solving<br><br>**Addition and subtraction**<br>Number facts adding and subtracting mentally<br>Problem Solving<br>Add larger numbers mentally using place value<br>Add subtract 2 digits mentally<br>Written method for addition<br>Written methods subtraction<br>Estimation<br><br>**Multiplication and division**<br>Identify multiples and factors<br>Know and use the vocabulary of prime number and recall prime numbers to 100<br>Multiply using formal written method<br>Multiply and divide whole numbers and decimals by 10, 100, 1000<br><br>**Shapes**<br>Compare and classify 2 d shapes<br>Compare and classify triangles<br>Construct triangles<br>Compare and classify quadrilaterals<br>Construct quadrilaterals<br>Drawing 2d shapes<br><br><br>**Measurement** | Multiplication and Division Problem Solving<br>Dividing multiples of 10/100<br>Partitioning to multiply 2 digit by 1 mentally<br>Using partitioning to divide mentally<br>Multiplying 3 numbers together<br> To recognise factor pairs<br>To recognise and use factor pairs<br>Written methods for multiplication<br>Division of 2 and 3 digits by 1 digit<br>Revision of multiplication<br>Written methods for division and multiplication<br><br>**Time:**<br>Read to 5 minute intervals<br>Convert times between 24 hour and 12 hour<br>Reading and interpreting timetables<br>Problem Solving<br><br>**Money:**<br>Recognising £ and P<br>Ordering money<br>Rounding to estimate money<br>Adding/subtracting with Decimal points<br>Using 4 operations to solve problems including money<br>Problem solving involving charts and interpreting data<br><br>**Problem Solving:**<br>Problem solving using mental methods<br>Solve number problems mentally<br>2 step word problems<br>Revision of addition and subtraction written methods | Converting between fractions and decimals          Tenths and hundredths<br>Making up to 1 whole, mixed numbers and fractions    Fractions of numbers<br><br>**Coordinates:**<br>Describe positions of 2d shapes in first quadrant<br>Plot points to draw polygons<br>Translation of shapes<br><br><br>**Area and Perimeter:**<br>Area and Perimeter of simple shapes<br>Area and Perimeter of complex shapes<br><br><br>**Multiplication and Division:**<br>Recall known multiplication facts<br>Multiplying multiples of 10/100<br>Multiplication and Division Problem Solving<br> Dividing multiples of 10/100<br>Partitioning to multiply 2 digit by 1 mentally<br>Using partitioning to divide mentally<br>Multiplying 3 numbers together<br>To recognise factor pairs<br>To recognise and use factor pairs<br>Written methods for multiplication<br>Division of 2 and 3 digits by 1 digit<br>Revision of multiplication |

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| | Metric units of length<br>Converting into M from cm, M into km and vice versa<br>Metric units of weight<br>Converting weights including decimals<br>Measuring weight/ reading scales<br>Metric units for capacity<br>Converting ml and l<br>Practical and problems<br>Measuring capacity/ reading scales<br>Measure and calculate perimeter of rectangles and compound shapes | | Written methods for division and multiplication<br><br>**Graphs and Statistics:**<br>Read and interpret information on a graph<br><br>**Problem Solving:**<br>Problem solving using mental methods<br>Solve number problems mentally<br>Revision of addition and subtraction written methods<br> 2 step word problems<br><br><br>**Revision of past topics** |
| <u>Year 5</u> | **Place Value**<br>Read, write, order and compare numbers to 1,000,000 and determine the value of each digit<br>Use Roman Numerals to 1000 and recognize years written in Roman Numerals<br>Round any number up to 1,000,000 to nearest 10, 100, 1000, 10000, 100000<br>Understand negative numbers<br>Count forwards and backwards in steps of powers of 10<br>Problem Solving<br><br>**Addition and subtraction** | **Multiplication and division**<br>Squared and cubed numbers, squared roots<br>Problem solving<br><br>**Fractions**<br>Equivalent fractions<br>Converting mixed numbers to improper fractions and vice versa<br>Simplifying fractions<br>Sequences<br>Comparing and ordering fractions<br>Adding and subtracting fractions<br>Fractions of amounts<br>Multiplying fractions<br>Problem solving | **Decimals & Percentages**<br>Decimals up to 2 decimal place<br>Decimals as fractions<br>Understand thousandths<br>Thousands as decimals<br>Rounding decimals<br>Order and compare decimals<br>Understand percentages<br>Percentages as fractions and decimals<br>Equivalent fractions, decimals and percentages<br><br>**Decimals**<br>Adding & subtracting decimals within 1<br>Adding & subtracting decimals |

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| | Add and subtract whole numbers using formal written method<br>Use inverse operations to check calculations<br>Problem Solving<br><br>**Multiplication and division**<br>Identify multiples and factors<br>Know and use the vocabulary of prime number and recall prime numbers to 100<br>Multiply using formal written method<br>Multiply and divide whole numbers and decimals by 10, 100, 1000<br><br>**Statistics**<br>Read, interpret and draw line graph<br>Use line graphs to solve problems<br>Read and interpret tables and timetables<br>Recognise squared and cubed numbers<br>Problem solving<br><br>**Perimeter and area**<br>Measure and calculate perimeter and area of rectangles and compound shapes<br>Problem solving | **Perimeter and area**<br>Quarter, half and whole turns<br>Measuring angles in degrees with a protractor<br>Draw lines and angles accurately<br>Calculate angles on a straight line<br>Calculate angles around a point<br>Calculating lengths and angles in shapes<br>Calculating angles around a point<br>Regular and irregular polygons<br>Reasoning about 3d shapes<br>Visualise 3-d objects from 2-d drawings (nets)<br>Problem solving | crossing the whole<br>Adding & subtracting decimals with the same number of decimal places<br>Adding & subtracting decimals with a different number of decimal places<br>Decimal sequences<br>Multiplying and dividing decimals by 10,100,1,000<br><br>**Position & Direction**<br>Position in the first quadrant<br>Reflection<br>Reflection with coordinates<br>Translation with coordinates<br><br>**Measurement - converting units**<br>Kilograms & kilometres<br>Milligrams & millilitres<br>Metric & Imperial units<br><br>**Volume**<br>Compare volume<br>Estimate volume<br>Estimate capacity |
| <u>Year 6</u> | **Place Value**<br>Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit<br>Round any whole number to a required degree of accuracy<br>Use negative numbers in context, and calculate intervals across 0 | **Ratio & Proportion**<br>solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts<br>solve problems involving the calculation of percentages and the use of percentages for comparison | **Properties of shape**<br>Measuring with a protractor, calculating angles, vertically opposite angles, angles in triangle, angles in special quadrilaterals, angles in regular polygons, drawing shapes accurately and drawing nets of 3d shapes |

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| Solve number and practical problems that involve all of the above.<br><br>**Addition, subtraction, multiplication and division**<br>Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication<br>Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context<br>Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context<br>Perform mental calculations, including with mixed operations and large numbers.<br>Identify common factors, common multiples and prime numbers<br>Use their knowledge of the order of operations to carry out calculations involving the 4 operations<br>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why<br>Solve problems involving addition, subtraction, multiplication and division<br>Use estimation to check answers to calculations and determine, in the context | solve problems involving similar shapes where the scale factor is known or can be found<br>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.<br>**Algebra**<br>use simple formulae<br>generate and describe linear number sequences<br>express missing number problems algebraically<br>find pairs of numbers that satisfy an equation with two unknowns<br>**Measurement**<br>solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate<br>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 3 decimal places<br>convert between miles and kilometres<br>recognise that shapes with the same areas can have different perimeters and vice versa<br>recognise when it is possible to use formulae for area and volume of shapes<br>calculate the area of parallelograms and triangles<br>calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres ($cm^3$) and cubic metres ($m^3$), and extending to other units | **Problem solving**<br>**Statistics**<br>Read and interpret line graphs, draw line graphs, use line graphs to solve problems, circles, read and interpret pie charts, pie charts with percentages, draw pie charts and the mean |

of a problem, an appropriate degree of accuracy.

**Fractions (decimals and percentages)**
use common factors to simplify fractions; use common multiples to express fractions in the same denomination
Compare and order fractions, including fractions >1
Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
Multiply simple pairs of proper fractions, writing the answer in its simplest form
Divide proper fractions by whole numbers
Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.
Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers are up to three decimal places
Multiply one-digit numbers with up to 2 decimal places by whole numbers
Use written division methods in cases where the answer has up to 2 decimal places
Solve problems which require answers to be rounded to specified degrees of accuracy
Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.