

Mental Maths objectives to be covered:

Number - Number and place value

Read and write whole numbers to 10,000 and beyond.

Count in multiples of 6, 7, 9, 25 and 1000.

Order and compare numbers beyond 1000; using the greater than and less than symbols.

Round any number to the nearest 10, 100.

Read Roman numerals to 100 (I to C).

Find the effect of multiplying and dividing a one- or two-digit number by 10, identifying the value of the digits in the answer as hundreds, tens, ones, tenths and hundredths etc.

Number - Addition and Subtraction:

Estimate and use inverse operations to check answers to a calculation.

Add and subtract mentally pairs of 2-digit whole numbers.

Add and subtract 1, 10 and 100 to any whole number.

Number - Multiplication and division:

Recall multiplication and division facts for multiplication tables up to 12×12 .

Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths.

Multiplying together three numbers.

Identify the doubles of 2-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves.

Number - Fractions:

Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$

Measurement:

Convert between different units of measure [for example, kilometre to metre; hour to minute (add explanation in guidance).

Read, write and convert time between analogue and digital 12- and 24-hour clocks.

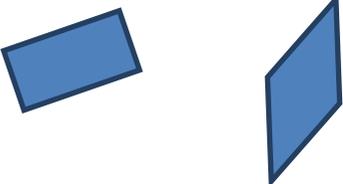
Convert from hours to minutes; minutes to seconds; years to months; weeks to days.

Geometry - Properties of shape:

Calculate perimeter of regular shapes

Year Four Medium Term Plan Term One

Week	Domain	National Curriculum Objectives	Reasoning, Conjecturing and Generalising Strategies	Small Step Objectives
Week 1	Number Place value Money	<p>Count on and back in multiples of 6, 7, 9, 25 and 100, including recognising and continuing number sequences of a constant size.</p> <p>Find 1000 more or less than a given number.</p> <p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).</p> <p>Order and compare numbers beyond 1000, understand and use the greater than and less than symbols.</p> <p>Count backwards through zero to include negative numbers and position on a number line.</p> <p>Identify, represent and estimate numbers using different representations</p> <p>Round any number to the nearest 10, 100</p> <p>Solve one and two step number and practical problems in various contexts, such as measure, involving all aspects of place value (with increasingly large positive numbers beyond 1000).</p> <p>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.</p>	<p>Spot the mistake: 950, 975, 1000, 1250 What is wrong with this sequence of numbers?</p> <p>True or False? 324 is a multiple of 9?</p> <p>What comes next? 6706 + 1000 = 7706 7706 + 1000 = 8706 8706 + 1000 = 9706</p> <p>Do, then explain 5035 5053 5350 5530 5503 If you wrote these numbers in order starting with the largest, which number would be third? Explain how you ordered the numbers.</p> <p>Do, then explain Show the value of the digit 4 in these numbers? 3041 4321 5497 Explain how you know.</p> <p>Make up an example Create four digit numbers where the digit sum is four and the tens digit is one. Eg 1210, 2110, 3010 What is the largest/smallest number?</p>	<p>Do I understand what each digit represents in a four-digit number?</p> <p>Can I write place value additions and subtractions?</p> <p>Can I place three-digit numbers on a line?</p> <p>Can I order three-digit numbers?</p> <p>Can I place four-digit numbers on a line?</p> <p>Can I compare four-digit numbers?</p>
Week 2	Number - Mental addition and Mental Subtraction	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts including money, deciding which operations and methods to use and why.</p> <p>Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 and 1000.</p>	<p>True or false? Are these number sentences true or false? $6.7 + 0.4 = 6.11$ $8.1 - 0.9 = 7.2$ Give your reasons.</p> <p>Hard and easy questions Which questions are easy / hard? $13323 - 70 =$ $12893 + 300 =$ $19354 - 500 =$ $19954 + 100 =$ Explain why you think the hard questions are hard?</p> <p>Making an estimate Which of these number sentences have the answer that is between 550 and 600 $1174 - 611$ $3330 - 2779$ $9326 - 8777$</p> <p>Always, sometimes, never Is it always sometimes or never true that the difference between two odd numbers is odd.</p>	<p>Can I add pairs of two-digit numbers or three-digit numbers and two-digit numbers using place value or counting on?</p> <p>Can I subtract two-digit numbers from two-digit numbers and from numbers greater than 100 by counting back or counting up?</p>

Week 3	Number - Written Addition and Written Subtraction	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts including money, deciding which operations and methods to use and why.</p> <p>Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 and 1000.</p>	<p><u>True or false?</u> Are these number sentences true or false? $6.7 + 0.4 = 6.11$ $8.1 - 0.9 = 7.2$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $13323 - 70 =$ $12893 + 300 =$ $19354 - 500 =$ $19954 + 100 =$ Explain why you think the hard questions are hard?</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 550 and 600 $1174 - 611$ $3330 - 2779$ $9326 - 8777$</p> <p><u>Always, sometimes, never</u> Is it always sometimes or never true that the difference between two odd numbers is odd.</p>	<p>Can I add 3-digit numbers using compact written addition?</p> <p>Can I subtract by counting up?</p> <p>Can I check my subtraction with addition?</p>
Week 4	Geometry	<p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</p> <p>Identify acute and obtuse angles and compare and order angles up to two right angles by size.</p> <p>Identify lines of symmetry in 2-D shapes presented in different orientations</p> <p>Complete a simple symmetric figure with respect to a specific line of symmetry.</p>	<p><u>What's the same, what's different?</u> What is the same and what is different about the <u>diagonals</u> of these 2-D shapes?</p> 	<p>Can I draw circles with different radii?</p> <p>Can I describe, name and sort 2D shapes?</p> <p>Can I describe, name and sort 3D shapes.</p> <p>Can I describe, name and sort triangles?</p>

		<p>Identify and use patterns, relationships and properties to investigate shapes, including making and testing general statements.</p> <p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.</p> <p>Find the area of rectilinear shapes by counting squares.</p> <p>Describe positions on a 2-D grid as coordinates in the first quadrant.</p> <p>Describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>Plot specified points and draw sides to complete a given polygon.</p>	<p>Visualising Imagine a square cut along the diagonal to make two triangles. Describe the triangles. Join the triangles on different sides to make new shapes. Describe them. (you could sketch them)</p> <p>Are any of the shapes symmetrical? Convince me.</p> <p>Other possibilities Can you draw a non-right angled triangle with a line of symmetry? Are there other possibilities.</p> <p>Always, sometimes, never Is it always, sometimes or never true that the two diagonals of a rectangle meet at right angles.</p> <p>Other possibilities Can you show or draw a polygon that fits both of these criteria? What do you look for? "Has exactly two equal sides." "Has exactly two parallel sides."</p> <p>Working backwards Here are the co-ordinates of corners of a rectangle which has width of 5. (7, 3) and (27, 3) What are the other two co-ordinates?</p>	<p>Can I use Venn diagrams or Carroll diagrams to sort shapes?</p>
<p>Week 5</p>	<p>Number - Mental Multiplication and Mental Division</p>	<p>Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths, (including: multiplying by 0 and 1; dividing by 1).</p> <p>Identify the doubles of 2-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves.</p> <p>Multiplying together three numbers.</p> <p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout (short multiplication).</p> <p>Understand the distributive law to multiply a 2-digit number by a 1-digit number ($39 \times 7 = 30 \times 7 + 9 \times 7$) and the associative law ($2 \times 3 \times 4 = 2 \times (3 \times 4)$).</p> <p>Solve problems involving multiplying and adding, including integer scaling problems (4 times as high) and harder correspondence problems such as n objects are connected to m objects (3 cakes shared between 10 pupils).</p>	<p>Missing numbers $72 = \square \times \square$</p> <p>Which pairs of numbers could be written in the boxes?</p> <p>Making links Eggs are bought in boxes of 12. I need 140 eggs; how many boxes will I need to buy?</p> <p>Use a fact $63 \div 9 = 7$ Use this fact to work out $126 \div 9 =$ $252 \div 7 =$</p> <p>Connected Calculations Put the numbers 7.2, 8, 0.9 in the boxes to make the number sentences correct.</p> <p>$\square = \square \square$</p> <p>$\square = \square \div \square$</p>	<p>Can I double two-digit and three-digit numbers using partitioning?</p> <p>Can I halve two-digit and three-digit numbers using partitioning?</p> <p>Do I know 3, 4, 6, 8 times tables and associated division facts?</p>
<p>Week 6</p>	<p>Number Place Value</p>	<p>Count on and back in multiples of 6, 7, 9, 25 and 100, including recognising and continuing number sequences of a constant size.</p>	<p>Spot the mistake: 950, 975, 1000, 1250 What is wrong with this sequence of numbers?</p>	<p>Can I use place value to add or subtract 4-digit numbers?</p>

	<p>Find 1000 more or less than a given number.</p> <p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).</p> <p>Order and compare numbers beyond 1000, understand and use the greater than and less than symbols.</p> <p>Count backwards through zero to include negative numbers and position on a number line.</p> <p>Identify, represent and estimate numbers using different representations</p> <p>Round any number to the nearest 10, 100</p> <p>Solve one and two step number and practical problems in various contexts, such as measure, involving all aspects of place value (with increasingly large positive numbers beyond 1000).</p> <p>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.</p>	<p>True or False? 324 is a multiple of 9?</p> <p>What comes next? 6706 + 1000 = 7706 7706 + 1000 = 8706 8706 + 1000 = 9706</p> <p>Do, then explain 5035 5053 5350 5530 5503 If you wrote these numbers in order starting with the largest, which number would be third? Explain how you ordered the numbers.</p> <p>Do, then explain Show the value of the digit 4 in these numbers? 3041 4321 5497 Explain how you know.</p> <p>Make up an example Create four digit numbers where the digit sum is four and the tens digit is one. Eg 1210, 2110, 3010 What is the largest/smallest number?</p> <p>Possible answers A number rounded to the nearest ten is 540. What is the smallest possible number it could be?</p> <p>What do you notice? Round 296 to the nearest 10. Round it to the nearest 100. What do you notice? Can you suggest other numbers like this?</p>	<p>Can I add and subtract 1, 10, 100, 1000 to and from 4-digit numbers?</p>
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Week 7	Mental Addition Mental Subtraction	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts including money, deciding which operations and methods to use and why.</p> <p>Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 and 1000.</p>	<p><u>True or false?</u> Are these number sentences true or false? $6.7 + 0.4 = 6.11$ $8.1 - 0.9 = 7.2$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $13323 - 70 =$ $12893 + 300 =$ $19354 - 500 =$ $19954 + 100 =$ Explain why you think the hard questions are hard?</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 550 and 600 $1174 - 611$ $3330 - 2779$ $9326 - 8777$</p> <p><u>Always, sometimes, never</u> Is it always sometimes or never true that the difference between two odd numbers is odd.</p>	Can I add & subtract 3-digit numbers using place value?
				Can I add and subtract 4-digit numbers using place value?
				Can I add & subtract near multiples from a 3-digit number?
Week 8	Written Addition Written Subtraction	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts including money, deciding which operations and methods to use and why.</p> <p>Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 and 1000.</p>	<p><u>True or false?</u> Are these number sentences true or false? $6.7 + 0.4 = 6.11$ $8.1 - 0.9 = 7.2$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? $13323 - 70 =$ $12893 + 300 =$ $19354 - 500 =$ $19954 + 100 =$ Explain why you think the hard questions are hard?</p> <p><u>Making an estimate</u> Which of these number sentences have the answer that is between 550 and 600 $1174 - 611$ $3330 - 2779$ $9326 - 8777$</p> <p><u>Always, sometimes, never</u> Is it always sometimes or never true that the difference between two odd numbers is odd.</p>	Can I subtract 3-digit numbers using expanded decomposition?
				Can I choose a subtraction calculation strategy?
Week 9	Measures Statistics	<p>Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</p> <p>Read, write and convert time between analogue and digital 12- and 24-hour clocks.</p> <p>Solve one and two-step problems involving time (Find time durations, start times and finish times/ interpret timetables)</p> <p>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.</p>	<p><u>Undoing</u> Imran's swimming lesson lasts 50 mins and it takes 15 mins to change and get ready for the lesson. What time does Imran need to arrive if his lesson finishes at 6.15pm?</p> <p><u>Explain thinking</u> The time is 10:35 am. Jack says that the time is closer to 11:00am than to 10:00am. Is Jack right? Explain why.</p>	Can I tell the time to the nearest minute?
				Can I use analogue, digital and Roman numeral clocks?
				Can I use am and pm times appropriately?
				Can I convert units of time, work out time intervals crossing the hour?

			0.37  0.32	
			What needs to be added to 3.23 to give 3.53? What needs to be added to 3.16 to give 3.2?	
Week 12	Measurement	<p>Convert between different units of measure [for example, kilometre to metre; hour to minute.</p> <p>Choose and use standard metric units and their abbreviations when estimating, measuring, comparing and recording length, weight and capacity (ensure decimal notation and meaning of kilo, centi, mili).</p> <p>Solve one and two step problems involving measure.</p> <p>Interpret intervals and divisions on partially numbered scales and record readings accurately.</p>	<p>Top Tips Explain your thinking Put these amounts in order starting with the largest. Half of three litres Quarter of two litres 300 ml</p> <p>Position the symbols Explain your thinking Place the correct symbols between the measurements > or < £23.61 2326p 2623p</p> <p>Write more statements One battery weighs the same as 60 paperclips; One pencil sharpener weighs the same as 20 paperclips. Write down some more things you know. How many pencil sharpeners weigh the same as a battery?</p>	
Week 13 -	Assessment Geometry	<p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</p> <p>Identify acute and obtuse angles and compare and order angles up to two right angles by size.</p> <p>Identify lines of symmetry in 2-D shapes presented in different orientations.</p> <p>Complete a simple symmetric figure with respect to a specific line of symmetry.</p> <p>Identify and use patterns, relationships and properties to investigate shapes, including making and testing general statements.</p> <p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares.</p> <p>Describe positions on a 2-D grid as coordinates in the first quadrant.</p> <p>Describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>Plot specified points and draw sides to complete a given polygon.</p>	<p>Undoing The perimeter of a rectangular garden is between 40 and 50 metres. What could the dimensions of the garden be?</p>	
Week 14	Revision of topics based on results of assessment			

Year Four: Medium Term Plan - Term Two

Number - Number and place value:

Count on and back in multiples of 6, 7, 9, 25 and 1000.

Find 1000 more or less than a given number.

Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).

Order and compare numbers beyond 1000; using the greater than and less than signs.

Round any number to the nearest 10, 100 or 1000 including decimals to the nearest whole number.

Find the effect of multiplying and dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as thousands, hundreds, tens ones, tenths and hundredths.

Number – Addition and Subtraction:

Estimate and use inverse operations to check answers to a calculation.

Add and subtract mentally pairs of 2-digit whole numbers.

Derive addition pairs that total 100; multiples of 50 that total 1000.

Number – Multiplication and division:

Recall multiplication and division facts for multiplication tables up to 12×12 .

Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths.

Multiply together three numbers.

Recognise and use factor pairs and commutativity in mental calculations.

Understand the distributive law to multiply a 2-digit number by a 1-digit number ($39 \times 7 = 30 \times 7 + 9 \times 7$) and the associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$.

Identify the doubles of 2-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves.

Number - fractions:

Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.

Measurement:

Convert between different units of measure [for example, kilometre to metre; hour to minute (add explanation in guidance)]

Geometry – Properties of shape:

Calculate perimeter of regular shapes

Week	Domain	National Curriculum Objectives	Reasoning, Conjecturing and Generalising Strategies	Small Step Objectives
Week 1	Number Place value Money	<p>Count in multiples of 6, 7, 9, 25 and 1000 including recognising and continuing number sequences of a constant size.</p> <p>Find 1000 more or less than a given number.</p> <p>Count backwards through zero to include negative numbers and position on a number line.</p> <p>Identify, represent and estimate numbers using different representations.</p> <p>Round any number to the nearest 10, 100 or 1000.</p> <p>Solve one and two step number and practical problems in various contexts, such as measure, involving all aspects of place value (with increasingly large positive numbers beyond 1000).</p> <p>Identify and use patterns, relationships and properties to investigate number, including making and testing general statements.</p>	<p>Spot the mistake: 950, 975,1000,1250 What is wrong with this sequence of numbers?</p> <p>What comes next? 6706+ 1000= 7706 7706 + 1000 = 8706 8706 + 1000 = 9706</p> <p>Do, then explain Explain how you ordered the numbers. 5035 5053 5350 5530 5503 If you wrote these numbers in order starting with the largest, which number would be third?</p> <p>Do, then explain Show the value of the digit 4 in these numbers? Explain how you know. 3041 4321 5497</p> <p>Make up an example Create four digit numbers where the digit sum is four and the tens digit is one. What is the largest/smallest number? Eg 1210, 2110, 3010</p> <p>Possible answers A number rounded to the nearest ten is 540. What is the smallest possible number it could be?</p> <p>What do you notice? Round 296 to the nearest 10. Round it to the nearest 100. What do you notice? Can you suggest other numbers like this?</p>	<p>Can I divide whole 2-digit numbers to give one-place decimals?</p> <p>Can I multiply 1-place decimals to give whole numbers?</p> <p>Can I recognise decimal and fraction forms of tenths?</p> <p>Can I place one-place decimals on a number line?</p> <p>Can I round tenths to nearest whole?</p> <p>Can I compare 1-place decimals and write one in between, e.g. 2.1 and 1.2 and say what whole number comes between these two?</p>
			<p>True or false? Are these number sentences true or false? 6.7 + 0.4 = 6.11 8.1 - 0.9 = 7.2 Give your reasons.</p> <p>Hard and easy questions Which questions are easy / hard? Explain why you think the hard questions are hard? 13323 - 70 = 12893 + 300 = 19354 - 500 = 19954 + 100 =</p> <p>Making an estimate Which number sentences have the answer that is between 550 and 600 1174 - 611 3330 - 2779 9326 - 8777</p> <p>Always, sometimes, never that the difference between two odd numbers is odd.</p>	<p>Can I use compact addition to add amounts of money?</p> <p>Can I use counting up to subtract three digit numbers, e.g. 414 - 278?</p> <p>Can I find change from £5 or £10, e.g. £5 - 3.78?</p> <p>Can I find a difference between prices, e.g. £4.24 and £3.78?</p>
			<p>True or false? Are these number sentences true or false? Give your reasons. 6.7 + 0.4 = 6.11 8.1 - 0.9 = 7.2</p> <p>Hard and easy questions Which questions are easy / hard? Explain why you think the hard questions are hard? 13323 - 70 = 12893 + 300 = 19354 - 500 = 19954 + 100 =</p> <p>Making an estimate Which number sentences have the answer that is between 550 and 600 1174 - 611 3330 - 2779 9326 - 8777</p> <p>Always, sometimes, never that the difference between two odd numbers is odd.</p>	<p>Can I add three two-digit numbers using compact addition?</p> <p>Can I add four two-digit numbers using compact addition?</p> <p>Can I subtract pairs of three digit numbers using decomposition (two 'exchanges')?</p> <p>Can I check subtraction with addition?</p> <p>Can I choose counting up or decomposition to solve subtractions?</p>
			<p>True or false? Are these number sentences true or false? Give your reasons. 6.7 + 0.4 = 6.11 8.1 - 0.9 = 7.2</p> <p>Hard and easy questions Which questions are easy / hard? Explain why you think the hard questions are hard? 13323 - 70 = 12893 + 300 = 19354 - 500 = 19954 + 100 =</p> <p>Making an estimate Which number sentences have the answer that is between 550 and 600 1174 - 611 3330 - 2779 9326 - 8777</p> <p>Always, sometimes, never that the difference between two odd numbers is odd.</p>	<p>Can I add three two-digit numbers using compact addition?</p> <p>Can I add four two-digit numbers using compact addition?</p> <p>Can I subtract pairs of three digit numbers using decomposition (two 'exchanges')?</p> <p>Can I check subtraction with addition?</p> <p>Can I choose counting up or decomposition to solve subtractions?</p>
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Week 2	Number Written Addition and Subtraction	<p>Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 and 1000.</p>	<p>True or false? Are these number sentences true or false? 6.7 + 0.4 = 6.11 8.1 - 0.9 = 7.2 Give your reasons.</p> <p>Hard and easy questions Which questions are easy / hard? Explain why you think the hard questions are hard? 13323 - 70 = 12893 + 300 = 19354 - 500 = 19954 + 100 =</p> <p>Making an estimate Which number sentences have the answer that is between 550 and 600 1174 - 611 3330 - 2779 9326 - 8777</p> <p>Always, sometimes, never that the difference between two odd numbers is odd.</p>	<p>Can I use compact addition to add amounts of money?</p> <p>Can I use counting up to subtract three digit numbers, e.g. 414 - 278?</p> <p>Can I find change from £5 or £10, e.g. £5 - 3.78?</p> <p>Can I find a difference between prices, e.g. £4.24 and £3.78?</p>
Week 3	Number - Written Addition and Subtraction	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts, including money, deciding which operations and methods to use and why.</p>	<p>True or false? Are these number sentences true or false? Give your reasons. 6.7 + 0.4 = 6.11 8.1 - 0.9 = 7.2</p> <p>Hard and easy questions Which questions are easy / hard? Explain why you think the hard questions are hard? 13323 - 70 = 12893 + 300 = 19354 - 500 = 19954 + 100 =</p> <p>Making an estimate Which number sentences have the answer that is between 550 and 600 1174 - 611 3330 - 2779 9326 - 8777</p> <p>Always, sometimes, never that the difference between two odd numbers is odd.</p>	<p>Can I add three two-digit numbers using compact addition?</p> <p>Can I add four two-digit numbers using compact addition?</p> <p>Can I subtract pairs of three digit numbers using decomposition (two 'exchanges')?</p> <p>Can I check subtraction with addition?</p> <p>Can I choose counting up or decomposition to solve subtractions?</p>

				Can I identify and describe patterns?
Week 4	Length Weight Data Handling	<p>Convert between different units of measure [for example, kilometre to metre; hour to minute (add explanation in guidance).</p> <p>Choose and use standard metric units and their abbreviations when estimating, measuring, comparing and recording length, weight and capacity (ensure decimal notation and meaning of kilo, centi, mili).</p> <p>Solve one and two step problems involving measure.</p>	<p>Statistics <u>True or false?</u> (Looking at a graph showing how the class sunflower is growing over time) "Our sunflower grew the fastest in July". Is this true or false?</p> <p><u>Convince me.</u> Make up your own 'true/false' statement about the graph.</p> <p><u>What's the same, what's different?</u> Pupils identify similarities and differences between different representations and explain them to each other</p> <p><u>Create a questions</u> Pupils ask (and answer) questions about different statistical representations using key vocabulary relevant to the objectives. (see above)</p>	Can I measure lengths in m, cm and mm?
				Can I convert between km, m, cm and mm?
				Can I measure weight in kg and g to one decimal place?
				Can I convert between kg and g, ml and l and make sensible estimations?
				Can I measure objects and record in tables?
				Can I represent and interpret data in bar graphs?
Week 5	Fractions	<p>Recognise and show, using diagrams, families of common equivalent fractions.</p> <p>Find unit and non-unit fractions of shapes, quantities and measures (where the answer is a whole-number).</p> <p>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.</p> <p>Add and subtract fractions with the same denominator (beyond one whole); placing mixed numbers correctly on a number line.</p> <p>Solve simple measure and money problems involving fractions.</p> <p>Recognise and write decimal equivalents of any number of tenths or hundredths.</p> <p>Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.</p>	<p><u>Spot the mistake...</u> and correct it. sixty tenths, seventy tenths, eighty tenths, ninety tenths, twenty tenths</p> <p><u>What comes next?</u> 83/100, 82/100, 81/100,,, 31/100, 41/100, 51/100,,,</p> <p><u>What do you notice?</u> 1/10 of 100 = 10 1/100 of 100 = 1 2/10 of 100 = 20 2/100 of 100 = 2</p> <p>How can you use this to work out 6/10 of 200? 6/100 of 200?</p> <p><u>True or false?</u> 1/20 of a metre= 20cm 4/100 of 2 metres = 40cm</p> <p><u>Give an Example</u> Give an example of a fraction that is more than a half but less than a whole. Now another example that no one else will think of. Explain how you know the fraction is more than a half but less than a whole. (draw an image)</p> <p><u>Missing symbol</u> Put the correct symbol < or > in each box 3.03 <input type="checkbox"/> 3.33</p> <p>0.37 <input type="checkbox"/> 0.32</p> <p>What needs to be added to 3.23 to give 3.53? What needs to be added to 3.16 to give 3.2?</p>	Can I identify equivalent fractions (1/2s, 1/3s, 1/4s, 1/6s, 1/8s, 1/10s, and 1/12s)?
				Can I reduce fractions their simplest form?
				Can I identify equivalent fractions and decimals (1/10s and 1/2s)?
				Can I add and subtract fractions with the same denominators with 2 wholes?

Week 6	Number Place Value Money	<p>Count in multiples of 6, 7, 9, 25 and 1000 including recognising and continuing number sequences of a constant size.</p> <p>Find 1000 more or less than a given number.</p> <p>Count backwards through zero to include negative numbers and position on a number line.</p> <p>Identify, represent and estimate numbers using different representations.</p> <p>Round any number to the nearest 10, 100 or 1000.</p> <p>Solve one and two step number and practical problems in various contexts, such as measure, involving all aspects of place value (with increasingly large positive numbers beyond 1000).</p> <p>Identify and use patterns, relationships and properties to investigate number, including making and testing general statements.</p>	<p>Spot the mistake: 950, 975, 1000, 1250 What is wrong with this sequence of numbers?</p> <p>What comes next? $6706 + 1000 = 7706$ $7706 + 1000 = 8706$ $8706 + 1000 = 9706$</p> <p>Do, then explain 5035 5053 5350 5530 5503 If you wrote these numbers in order starting with the largest, which number would be third? Explain how you ordered the numbers.</p> <p>Do, then explain Explain how you know. Show the value of the digit 4 in these numbers? 3041 4321 5497</p> <p>Make up an example Create four digit numbers where the digit sum is four and the tens digit is one. What is the largest/smallest number? Eg 1210, 2110, 3010</p> <p>Possible answers A number rounded to the nearest ten is 540. What is the smallest possible number it could be?</p> <p>What do you notice? Round 296 to the nearest 10. Round it to the nearest 100. What do you notice? Can you suggest other numbers like this?</p>	<p>Can I multiply and divide by 10 and 100 (whole answers or with 1dp)?</p> <p>Can I multiply multiples of 10 and 100 by single-digit numbers?</p> <p>Can I add and subtract 0.1 and 1 to/from numbers with one decimal place?</p> <p>Can I use negative numbers in context of temperature?</p> <p>Can I place negative numbers on a line?</p> <p>Can I order positive and negative numbers?</p>
Week 7	Mental Addition Mental Subtraction	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts, including money, deciding which operations and methods to use and why.</p>	<p>True or false? Are these number sentences true or false? Give your reasons. $6.7 + 0.4 = 6.11$ $8.1 - 0.9 = 7.2$</p> <p>Hard and easy questions Which questions are easy / hard? Explain why the hard questions are hard? $13323 - 70 =$ $12893 + 300 =$ $19354 - 500 =$ $19954 + 100 =$</p> <p>Making an estimate Which number sentences have the answer that is between 550 and 600 $1174 - 611$ $3330 - 2779$ $9326 - 8777$</p> <p>Always, sometimes, never Is it always sometimes or never true that the difference between two odd numbers is odd.</p> <p>Use the inverse Use the inverse to check if the following calculations are correct: $23 \times 4 = 92$ $117 \div 9 = 14$</p> <p>Size of an answer Will the answer to the following calculations be greater or less than 300 $152 \times 2 =$ $78 \times 3 =$ $87 \times 3 =$ $4 \times 74 =$</p>	<p>Can I add single-digit numbers to three and four-digit numbers?</p> <p>Can I subtract single-digit numbers from three and four-digit numbers?</p> <p>Can I add multiples of 10, 100 and 1000 to four-digit numbers?</p> <p>Can I subtract multiples of 10, 100 and 1000 from four-digit numbers?</p>

Week 8	Written Addition Written Subtraction	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts, including money, deciding which operations and methods to use and why.</p>	<p><u>True or false?</u> Are these number sentences true or false? Give your reasons. $6.7 + 0.4 = 6.11$ $8.1 - 0.9 = 7.2$</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? Explain why the hard questions are hard? $13323 - 70 =$ $12893 + 300 =$ $19354 - 500 =$ $19954 + 100 =$</p> <p><u>Making an estimate</u> Which number sentences have the answer that is between 550 and 600 $1174 - 611$ $3330 - 2779$ $9326 - 8777$</p> <p><u>Always, sometimes, never</u> Is it always sometimes or never true that the difference between two odd numbers is odd.</p> <p><u>Use the inverse</u> Use the inverse to check if the following calculations are correct: $23 \times 4 = 92$ $117 \div 9 = 14$</p> <p><u>Size of an answer</u> Will the answer to the following calculations be greater or less than 300 $152 \times 2 =$ $78 \times 3 =$ $87 \times 3 =$ $4 \times 74 =$</p>	<p>Can I remember how to add three three-digit numbers using compact addition?</p> <p>Can I remember how to use compact addition to add amounts of money?</p> <p>Can I remember how to use expanded decomposition to subtract three-digit numbers?</p> <p>Can I subtract three-digit numbers using compact decomposition?</p>
Week 9	Measures Time Position Direction	<p>Read, write and convert time between analogue and digital 12- and 24-hour clocks.</p> <p>Solve one and two-step problems involving time (Find time durations, start times and finish times/ interpret timetables).</p> <p>Interpret intervals and divisions on partially numbered scales and record readings accurately.</p> <p>Describe positions on a 2-D grid as coordinates in the first quadrant.</p> <p>Describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>Plot specified points and draw sides to complete a given polygon.</p> <p>To know that angles are measured in degrees and that one whole turn is 360 degrees; compare and order angles less than 180 degrees.</p>	<p><u>Working backwards</u> Put these times of the day in order, starting with the earliest time. A: Quarter to four in the afternoon B: 07:56 C: six minutes to nine in the evening D: 14:36</p> <p>The answer is ... 225 metres What is the question?</p> <p><u>What do you notice?</u> Continue the pattern 1:00pm = 13:00 2:00pm = 14:00</p>	<p>Can I read and tell the time to nearest minute on digital and analogue clocks?</p> <p>Can I use am, pm, 12-hour clock notation, and 24-hour time?</p> <p>Can I work out time intervals crossing the hour?</p> <p>Can I read and work out questions from simple timetables?</p> <p>Can I read and plot co-ordinates in the first quadrant?</p> <p>Can I complete polygons by giving missing point?</p> <p>Can I translate shapes in the first quadrant?</p>

Week 10	Mental Multiplication Division	<p>Multiplying together three numbers.</p> <p>Recognise and use factor pairs and commutativity in mental calculations.</p> <p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.</p> <p>Solve problems involving multiplying and adding, including integer scaling problems (4 times as high) and harder correspondence problems such as n objects are connected to m objects (3 cakes shared between 10 pupils).</p>	<p>Missing numbers Which pairs of numbers could be written in the boxes? $72 = \square \times \square$</p> <p>Making links Eggs are bought in boxes of 12. I need 140 eggs; how many boxes will I need to buy?</p> <p>Use a fact $63 \div 9 = 7$ Use this fact to work out $126 \div 9 =$ $252 \div 7 =$</p> <p>Connected Calculations Put the numbers 7.2, 8, 0.9 in the boxes to make the number sentences correct.</p> <p>$\square = \square \times \square$</p> <p>$\square = \square \div \square$</p> <p>Always, sometimes, never? Is it always, sometimes or never true that an even number that is divisible by 3 is also divisible by 6. Is it always, sometimes or never true that the sum of four even numbers is divisible by 4.</p> <p>Possibilities Adult tickets cost £8 and Children's tickets cost £4. How many adult and children's tickets could I buy for £100 exactly? Can you find more than one way of doing this?</p> <p>Making links How can you use factor pairs to solve this calculation? 13×12 ($13 \times 3 \times 4$, $13 \times 3 \times 2 \times 2$, $13 \times 2 \times 6$)</p>	<p>Do I know multiplication and division facts for the 9 times table?</p> <p>Can I begin to know multiplication and division facts for the 7 times table?</p> <p>Can I revise all times tables up to 12×12?</p> <p>Can I find factors of numbers up to 40?</p> <p>Can I use tables facts and place value to multiply multiples of 10 and 100 by single-digit numbers, e.g. 4×70 and 3×400?</p>
Week 11	Multiplication and division	<p>Multiplying together three numbers.</p> <p>Recognise and use factor pairs and commutativity in mental calculations.</p> <p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.</p> <p>Solve problems involving multiplying and adding, including integer scaling problems (4 times as high) and harder correspondence problems such as n objects are connected to m objects (3 cakes shared between 10 pupils).</p>	<p>Prove It What goes in the missing box? $6 \square \times 4 = 512$ Prove it.</p> <p>How close can you get? $\square \square \square \times 7$ Using the digits 3, 4 and 6 in the calculation above how close can you get to 4500? What is the largest product? What is the smallest product?</p>	<p>Can I use partitioning to multiply three-digit numbers by single-digit numbers?</p> <p>Do I know the 11 and 12 times tables?</p> <p>Divide two-digit numbers by single-digit numbers, including those divisions which give a remainder (answers between 10 and 30)?</p>
Week 12	Assessment Geometry	<p>Visualise 3D objects from 2D drawings; make nets of common solids.</p>		

Year Four: Medium Term Plan - Term Three

Number - Number and place value:

Count in multiples of 6, 7, 9, 25 and 1000.

Find 1000 more or less than a given number.

Count backwards through zero to include negative numbers.

Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000.

Round any number to the nearest 10, 100 or 1000, including decimals to the nearest whole number.

Read Roman numerals to 100 (I to C)

Find the effect of multiplying and dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as thousands, hundreds, tens ones, tenths and hundredths

Number – Addition and Subtraction:

Estimate and use inverse operations to check answers to a calculation.

Number – Multiplication and division:

Recall multiplication and division facts for multiplication tables up to 12×12 .

Use place value, known and derived facts to multiply and divide mentally by multiples of 10, 100 and tenths.

Multiplying together three numbers.

Recognise and use factor pairs and commutativity in mental calculations.

Understand the distributive law to multiply a 2-digit number by a 1-digit number ($39 \times 7 = 30 \times 7 + 9 \times 7$) and the associative law ($(2 \times 3) \times 4 = 2 \times (3 \times 4)$).

Identify the doubles of 2 digit numbers and multiples of 100 to 5000; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves.

Number - fractions:

Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.

Measurement:

Convert between different units of measure [for example, kilometre to metre; hour to minute (add explanation in guidance)].

Read, write and convert time between analogue and digital 12- and 24-hour clocks.

Convert from hours to minutes; minutes to seconds; years to months; weeks to days.

Geometry – Properties of shape:

Calculate perimeter of regular shapes.

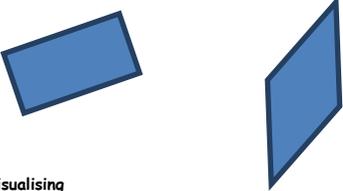
Year Four: Medium Term Plan -Term Three

Week	Domain	National Curriculum Objectives	Reasoning, Conjecturing and Generalising Strategies	Small Step Objectives					
Week 1	Number Place value	<p>Count in multiples of 6, 7, 9, 25 and 1000 including recognising and continuing number sequences of a constant size.</p> <p>Count backwards through zero to include negative numbers and position positive and negative numbers of a number line.</p> <p>Understand and use the greater than less than symbols.</p> <p>Identify, represent and estimate numbers using different representations.</p> <p>Solve one and two step number and practical problems in various contexts, such as measure, involving all aspects of place value (with increasingly large positive numbers beyond 1000).</p> <p>Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</p> <p>Identify and use patterns, relationships and properties to investigate number, including making and testing general statements.</p>	<p>Spot the mistake: 950, 975,1000,1250 What is wrong with this sequence of numbers?</p> <p>True or False? 324 is a multiple of 9?</p> <p>What comes next? 6706+ 1000= 7706 7706 + 1000 = 8706 8706 + 1000 = 9706</p> <p>Do, then explain 5035 5053 5350 5530 5503 If you wrote these numbers in order starting with the largest, which number would be third? Explain how you ordered the numbers.</p> <p>Do, then explain Show the value of the digit 4 in these numbers? Explain how you know. 3041 4321 5497</p> <p>Make up an example Create four digit numbers where the digit sum is four and the tens digit is one. What is the largest/smallest number? Eg 1210, 2110, 3010</p> <p>Possible answers A number rounded to the nearest ten is 540. What is the smallest possible number it could be?</p> <p>What do you notice? Round 296 to the nearest 10. Round it to the nearest 100. What do you notice? Can you suggest other numbers like this?</p>	<p>Can I use place value to add to 4-digit numbers?</p> <p>Can I use place value to subtract from 4-digit numbers?</p> <p>Can I place 4-digit numbers on a line?</p> <p>Can I round 4-digit numbers to the nearest 10, 100 or 1000?</p> <p>Can I count on and back in steps of 25 and 1000?</p> <p>Can I write Roman numerals to 100?</p>					
					Week 2	Number - Mental Subtraction Written Subtraction	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts, including money, deciding which operations and methods to use and why.</p>	<p>True or false? Are these number sentences true or false? 6.7 + 0.4 = 6.11 8.1 - 0.9 = 7.2 Give your reasons.</p> <p>Hard and easy questions Which questions are easy / hard? Explain why you think the hard questions are hard? 13323 - 70 = 12893 + 300 = 19354 - 500 = 19954 + 100 =</p> <p>Making an estimate Which number sentences have the answer that is between 550 and 600 1174 - 611 3330 - 2779 9326 - 8777</p> <p>Always, sometimes, never Is it always sometimes or never true that the difference between two odd numbers is odd.</p>	<p>Can I use compact decomposition to subtract three-digit numbers?</p> <p>Can I use expanded then compact decomposition to subtract pairs of four-digit numbers?</p> <p>Can I use compact decomposition to subtract three- and four-digit numbers from four-digit numbers?</p> <p>Can I use counting up to subtract pairs of four-digit numbers?</p> <p>Can I choose a strategy to subtract pairs of four-digit numbers depending on the numbers involved?</p>

<p>Week 3</p>	<p>Number - Addition Subtraction</p>	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction two-step problems in contexts, including money, deciding which operations and methods to use and why.</p>	<p><u>True or false?</u> Are these number sentences true or false? $6.7 + 0.4 = 6.11$ $8.1 - 0.9 = 7.2$ Give your reasons.</p> <p><u>Hard and easy questions</u> Which questions are easy / hard? Explain why you think the hard questions are hard? $13323 - 70 =$ $12893 + 300 =$ $19354 - 500 =$ $19954 + 100 =$</p> <p><u>Making an estimate</u> Which number sentences have the answer that is between 550 and 600 $1174 - 611$ $3330 - 2779$ $9326 - 8777$</p> <p><u>Always, sometimes, never</u> Is it always sometimes or never true that the difference between two odd numbers is odd.</p> <p><u>Convince me</u></p> <p></p> <p>What is the largest possible number that will go in the rectangular box? What is the smallest? Convince me</p> <p><u>Making an estimate</u> Which number sentences have the answer that is between 550 and 600 $1174 - 611$ $3330 - 2779$ $9326 - 8777$</p> <p><u>Always, sometimes, never</u> Is it always sometimes or never true that the difference between two odd numbers is odd.</p>	<p>Can I use decomposition to subtract any pair of four-digit numbers, including those needing 3 moves?</p> <p>Can I add any pair of 4-digit numbers using compact addition?</p> <p>Can I add and subtract near multiples of 10, 100 and 1000 to/from 3- and 4-digit numbers?</p> <p>Can I choose mental or written methods to add and subtract?</p> <p>Can I solve word problems involving addition and subtraction?</p>
<p>Week 4</p>	<p>Area Perimeter Coordinates</p>	<p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.</p> <p>Describe positions on a 2-D grid as coordinates in the first quadrant.</p> <p>Describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>Plot specified points and draw sides to complete a given polygon.</p> <p>Visualise 3D objects from 2D drawings; make nets of common solids.</p> <p>To know that angles are measured in degrees and that one whole turn is 360 degrees; compare and order angles less than 180 degrees.</p>	<p><u>Testing conditions</u> If the width of a rectangle is 3 metres less than the length and the perimeter is between 20 and 30 metres, what could the dimensions of the rectangle lobe?</p> <p><u>Always, sometimes, never</u> If you double the area of a rectangle, you double the perimeter.</p>	<p>Can I find area of rectilinear shapes by counting squares?</p> <p>Can I find perimeter of rectilinear shapes in cm by counting?</p> <p>Can I calculate perimeter in cm and m of rectangles?</p> <p>Can I use co-ordinates in the first quadrant and join to draw posited polygons.</p>

Week 5	Fractions Decimals	<p>Recognise and show, using diagrams, families of common equivalent fraction.</p> <p>Find unit and non-unit fractions of shapes, quantities and measures (where the answer is a whole-number).</p> <p>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.</p> <p>Solve simple measure and money problems fractions.</p> <p>Add and subtract fractions with the same denominator (beyond one whole); placing mixed numbers correctly on a number line.</p>	<p>Spot the mistake... and correct it. sixty tenths, seventy tenths, eighty tenths, ninety tenths, twenty tenths</p> <p>What comes next? 83/100, 82/100, 81/100,,, 31/100, 41/100, 51/100,,,</p> <p>What do you notice? 1/10 of 100 = 10 1/100 of 100 = 1 2/10 of 100 = 20 2/100 of 100 = 2 How can you use this to work out 6/10 of 200? 6/100 of 200?</p> <p>True or false? 1/20 of a metre= 20cm 4/100 of 2 metres = 40cm</p>	<p>Can I compare and order number with 2 decimal places?</p> <p>Can I place numbers with 2 decimal places on landmarked lines (marked in 0.1s)?</p> <p>Can I add/subtract 0.1/0.01 to/from numbers with 2 decimal places?</p> <p>Can I count on/back in tenths & hundredths?</p> <p>Can I add/subtract multiples of 0.1/0.01?</p> <p>Can I solve simple measure problems using place value in lengths in metres with 2 decimal places?</p>
Week 6	Fractions Decimals	<p>Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.</p> <p>Round decimals with one decimal place to the nearest whole number.</p> <p>Compare numbers with the same number of decimal places up to two decimal places.</p> <p>Solve simple measure and money problems involving decimals to two decimal places.</p> <p>Partition decimals and place decimals on a number line.</p>	<p>Give an Example Give an example of a fraction that is more than a half but less than a whole. Now another example that no one else will think of. Explain how you know the fraction is more than a half but less than a whole. (draw an image)</p> <p>Missing symbol Put the correct symbol < or > in each box 3.03 <input type="text"/> 3.33</p> <p>0.37 <input type="text"/> 0.32</p> <p>What needs to be added to 3.23 to give 3.53? What needs to be added to 3.16 to give 3.2?</p>	<p>Can I mark numbers with 1 decimal place on an ENL and round to the nearest whole?</p> <p>Do I know what each digit stands for in numbers with 2 decimal places?</p> <p>Can I multiply and divide by 10 and 100 to give tenths and hundredths?</p> <p>Do I know equivalent 0.1s and 1/10s, and 0.01s and 1/100s?</p> <p>Can I write place value related additions and subtractions for nos with 2 decimal places?</p>

<p>Week 7</p>	<p>Multiplication Division</p>	<p>Multiplying together three numbers.</p> <p>Recognise and use factor pairs and commutativity in mental calculations.</p> <p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.</p> <p>Estimate and use inverse operations to check answers to a calculation.</p> <p>Divide 3 digit by 1 digit numbers using the formal written layout (short division).</p> <p>Solve multiplication and division two-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Missing numbers Which pairs of numbers could be written in the boxes? $72 = \square \times \square$</p> <p>Making links Eggs are bought in boxes of 12. I need 140 eggs; how many boxes will I need to buy?</p> <p>Use a fact $63 \div 9 = 7$ Use this fact to work out $126 \div 9 =$ $252 \div 7 =$</p> <p>Connected Calculations Put the numbers 7, 2, 8, 0, 9 in the boxes to make the number sentences correct.</p> <p>$\square = \square \square$ $\square = \square \div \square$</p> <p>Always, sometimes, never? Is it always, sometimes or never true that an even number that is divisible by 3 is also divisible by 6. Is it always, sometimes or never true that the sum of four even numbers is divisible by 4.</p> <p>Possibilities Adult tickets cost £8 and Children's tickets cost £4. How many adult and children's tickets could I buy for £100 exactly? Can you find more than one way of doing this?</p> <p>Making links How can you use factor pairs to solve this calculation? 13×12 $(13 \times 3 \times 4, 13 \times 3 \times 2 \times 2, 13 \times 2 \times 6)$</p> <p>Prove It What goes in the missing box? $6 \square \times 4 = 512$ Prove it.</p> <p>How close can you get? $\square \square \square \times 7$ Using the digits 3, 4 and 6 in the calculation above how close can you get to 4500? What is the largest product? What is the smallest product?</p>	<p>Can I find factors of numbers less than 50?</p> <p>Can I use factors to carry out mental multiplication?</p> <p>Can I find the product of 3 single-digit numbers using commutativity to help?</p> <p>Can I use times tables and place value to divide multiples of 10, e.g. $350 \div 7$?</p> <p>Can I solve scaling problems (by whole number factors)?</p> <p>Can I convert from centimetres to metres?</p> <p>Can I solve correspondence problems?</p>
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<p>Week 8</p>	<p>Geometry</p>	<p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</p> <p>Identify acute and obtuse angles and compare and order angles up to two right angles by size.</p> <p>Identify lines of symmetry in 2-D shapes presented in different orientations.</p> <p>Complete a simple symmetric figure with respect to a specific line of symmetry.</p> <p>Identify and use patterns, relationships and properties to investigate shapes, including making and testing general statements.</p>	<p><u>Convince me</u> Ayub says that he can draw a right angled triangle which has another angle which is obtuse. Is he right? Explain why.</p> <p><u>What's the same, what's different?</u> What is the same and what is different about the <u>diagonals</u> of these 2-D shapes?</p>  <p><u>Visualising</u> Imagine a square cut along the diagonal to make two triangles. Describe the triangles. Join the triangles on different sides to make new shapes. Describe them. (you could sketch them)</p> <p>Are any of the shapes symmetrical? Convince me.</p> <p><u>Other possibilities</u> Can you draw a non-right angled triangle with a line of symmetry? Are there other possibilities.</p> <p><u>Always, sometimes, never</u> Is it always, sometimes or never true that the two diagonals of a rectangle meet at right angles.</p> <p><u>Other possibilities</u> Can you show or draw a polygon that fits both of these criteria? What do you look for? "Has exactly two equal sides." "Has exactly two parallel sides."</p> <p><u>Working backwards</u> Here are the co-ordinates of corners of a rectangle which has width of 5. (7, 3) and (27, 3) What are the other two co-ordinates?</p>	<p>Can I complete shapes with respect to a line of symmetry?</p> <p>Can I recognise and compare acute and obtuse angles and angles of 90 degrees?</p> <p>Can I compare and classify triangles and quadrilaterals, based on properties including types of angles?</p>
<p>Week 9</p>	<p>Time Time Graphs</p>	<p>Convert between different units of measure [for example, kilometre to metre; hour to minute (add explanation in guidance).</p> <p>Choose and use standard metric units and their abbreviations when estimating, measuring, comparing and recording length, weight and capacity (ensure decimal notation and meaning of kilo, centi, mili).</p> <p>Solve one and two step problems involving measure. Interpret intervals and divisions on partially numbered scales and record readings accurately.</p> <p>Read, write and convert time between analogue and digital 12- and 24-hour clocks.</p> <p>Solve one and two-step problems involving time (Find time durations, start times and finish times/ interpret timetables).</p>	<p><u>Working backwards</u> Put these times of the day in order, starting with the earliest time. A: Quarter to four in the afternoon B: 07:56 C: six minutes to nine in the evening D: 14:36</p> <p><u>What do you notice?</u> Continue the pattern 1:00pm = 13:00 2:00pm = 14:00</p>	<p>Can I read the 24-hour clock converting times to am and pm, both digital and analogue formats?</p> <p>Can I find time intervals using 24-hour clock?</p> <p>Can I read, interpret and describe a time graph?</p> <p>Can I draw a time graph?</p> <p>Can I convert between units of time?</p>

Week 10	Fractions Division	Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.	<u>Give an Example</u> Give an example of a fraction that is more than a half but less than a whole. Now another example that no one else will think of. Explain how you know the fraction is more than a half but less than a whole. (draw an image)	Can I identify equivalent fractions, incl. decimals?
		Round decimals with one decimal place to the nearest whole number.		Can I find non-unit fractions of amounts?
		Compare numbers with the same number of decimal places up to two decimal places.	<u>Missing symbol</u> Put the correct symbol < or > in each box	Can I solve fraction word problems?
		Solve simple measure and money problems involving decimals to two decimal places.	3.03 <input type="checkbox"/> 3.33	Can I divide two-digit nos by single-digit nos, answers less than 30?
		Partition decimals and place decimals on a number line.	0.37 <input type="checkbox"/> 0.32	
		Divide 3 digit by 1 digit numbers using the formal written layout (short division).	What needs to be added to 3.23 to give 3.53? What needs to be added to 3.16 to give 3.2?	
		Solve multiplication and division two-step problems in contexts, deciding which operations and methods to use and why.		
Week 11	Calculations	Solve one and two-step problems		Can I multiply 3-digit numbers by single-digit numbers, estimating answers first?
				Can I solve word problems requiring multiplication or division?
				Can I choose mental or written method to solve a range of calculations, all four operations?
				Can I choose which operations(s) are necessary to solve word problems?
Week 12	Assessment	Assessment week is moveable		
Week 13	Revision of topics based on results of assessment			