

Year 3: Mathematics Overview

Title	Core Skills	Challenge	Target Tracker Statements
<p>Term 1 3 weeks</p> <p>Number Sense</p> <p>On Going Skills:</p>	<p>count from 0 in multiples of 100; find 10 or 100 more or less than a given number</p> <p>recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>compare and order numbers up to 1000</p> <p>identify, represent and estimate numbers using different representations</p> <p>read and write numbers to at least 1000 in numerals and in words</p> <p>solve number problems and practical problems involving these ideas</p>	<p>The pupil can count up to identify numbers that occur in both the sequence of 200s and the sequence of 300s.</p> <p>The pupil can work out 20 more than 186 or 300 less than 902.</p> <p>The pupil can solve problems such as 'Arrange the digit cards 4, 5 and 8 to make the number closest to 500' and can justify their choice using the language of place value.</p> <p>The pupil can solve problems in the context of measurement such as ordering the heights of mountains.</p> <p>The pupil can partition a three-digit number and use that to work out its complement to 1000, explaining their reasoning using the language of place value.</p> <p>The pupil can solve problems such as 'Given two numbers up to 1000, find another that is between them alphabetically.'</p> <p>The pupil can solve problems such as 'I have 362 plastic cubes and boxes that will hold 50, 20, 8 or 4 at a time. What is the fewest number of boxes I need to box all of them?'</p>	<ul style="list-style-type: none"> • count from 0 in multiples of 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • identify, represent and estimate numbers using different representations • read and write numbers to at least 1000 in numerals and in words • solve number problems and practical problems involving these ideas

<p>Term 2 3 weeks</p> <p>Additive Reasoning</p> <p>On Going Skills:</p>	<p>add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> > a three-digit number and ones > a three-digit number and tens > a three-digit number and hundreds <p>add and subtract numbers with up to three digits</p> <p>estimate the answer to a calculation and use inverse operations to check answers</p> <p>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>add and subtract amounts of money to give change, using both £ and p in practical contexts</p> <p>interpret and present data using bar charts, pictograms and tables</p> <p>solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables</p>	<p>The pupil can solve missing number problems such as $384 = 171 + ?$.</p> <p>The pupil can solve problems such as 'You have six cards with the digits 2, 3, 4, 6, 7 and 8 on them, one digit per card. Arrange them to make three two-digit numbers so that the sum of them is as near 100 as possible'.</p> <p>The pupil can make up problems such as 'I am thinking of a number. I subtract 14 from it and add five and I get 91. What is my number?'</p>	<ul style="list-style-type: none"> • <u>add and subtract numbers mentally, including:</u> <ul style="list-style-type: none"> > <u>a three-digit number and ones</u> > <u>a three-digit number and tens</u> > <u>a three-digit number and hundreds</u> • <u>add and subtract numbers with up to three digits</u> • <u>estimate the answer to a calculation and use inverse operations to check answers</u> • <u>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</u>
<p>Term 2 3 weeks</p> <p>Multiplicative Reasoning</p> <p>On Going Skills:</p>	<p>count from 0 in multiples of 4, 8, 50 and 100</p> <p>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>write and calculate mathematical statements for multiplication and division using the multiplication tables that they know</p> <p>solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p>		<ul style="list-style-type: none"> • count from 0 in multiples of 4, 8, 50 and 100 • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects

Geometric Reasoning	<p>draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>recognise that angles are a property of shape or a description of a turn</p> <p>identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.</p>		
Number Sense	<p>count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>compare and order numbers up to 1000</p> <p>identify, represent and estimate numbers using different representations</p> <p>read and write numbers up to 1000 in numerals and in words</p> <p>solve number problems and practical problems involving these ideas</p> <p>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p>measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</p>		<ul style="list-style-type: none"> • count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words • count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
Additive Reasoning	<p>add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> > a three-digit number and ones > a three-digit number and tens > a three-digit number and hundreds <p>add and subtract numbers with up to three digits</p> <p>estimate the answer to a calculation and use inverse operations to check answers</p> <p>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</p> <p>measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>add and subtract amounts of money to give change, using both £ and p in practical contexts</p> <p>interpret and present data using bar charts, pictograms and tables</p>		

	<p>solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables</p>		
Number Sense	<p>identify, represent and estimate numbers using different representations</p> <p>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</p> <p>recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]</p> <p>compare and order unit fractions with the same denominator</p> <p>solve problems that involve all of the above</p>		<ul style="list-style-type: none"> • identify, represent and estimate numbers using different representations • count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] • compare and order unit fractions with the same denominator <p style="text-align: center;">solve problems that involve all of the above</p>
Multiplicative Reasoning	<p>count from 0 in multiples of 4, 8, 50 and 100</p> <p>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers</p> <p>solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p> <p>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</p> <p><u>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</u></p> <p>solve problems that involve all of the above</p>		<ul style="list-style-type: none"> • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
Geometric Reasoning	<p>draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>recognise that angles are a property of shape or a description of a turn</p> <p>identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle</p> <p>identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p>		

<p>Number Sense</p>	<p>count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>compare and order numbers up to 1000</p> <p>identify, represent and estimate numbers using different representations</p> <p>read and write numbers up to 1000 in numerals and in words</p> <p>solve number problems and practical problems involving these ideas</p> <p>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p>estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</p> <p>know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p>compare durations of events [for example, to calculate the time taken by particular events or tasks]</p> <p>interpret and present data using bar charts, pictograms and tables</p>		<ul style="list-style-type: none"> • count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words • count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
<p>Additive Reasoning</p>	<p>add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> > a three-digit number and ones > a three-digit number and tens > a three-digit number and hundreds <p>add and subtract numbers with up to three digits using formal written methods of columnar addition and subtraction</p> <p>estimate the answer to a calculation and use inverse operations to check answers</p> <p>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</p> <p>measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>add and subtract amounts of money to give change, using both £ and p in practical contexts</p> <p>record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</p> <p>know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p>compare durations of events [for example, to calculate the time taken by particular events or tasks]</p> <p>interpret and present data using bar charts, pictograms and tables</p> <p>solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables</p>		

Number Sense	<p>identify, represent and estimate numbers using different representations</p> <p>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</p> <p>recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>recognise and show, using diagrams, equivalent fractions with small denominators</p> <p>add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]</p> <p>compare and order unit fractions and fractions with the same denominator</p> <p>solve problems that involve all of the above</p>		<ul style="list-style-type: none"> recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators recognise and show, using diagrams, equivalent fractions with small denominators add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] compare and order unit fractions and fractions with the same denominator solve problems that involve all of the above
Multiplicative Reasoning	<p>count from 0 in multiples of 4, 8, 50 and 100</p> <p>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods</p> <p>solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p> <p>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</p> <p>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>solve problems that involve all of the above</p> <p>know the number of seconds in a minute and the number of days in each month, year and leap year</p>		
Geometric Reasoning	<p>recognise that angles are a property of shape or a description of a turn</p> <p>identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle</p> <p>identify horizontal and vertical lines and pairs of perpendicular and parallel lines measure the perimeter of simple 2-D shapes</p>		

Title	Core Skills	Challenge	Target Tracker Statements
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Year 4: Mathematics Overview

<p>Term 1 3 weeks</p> <p>Number Sense</p> <p>On Going Skills:</p>	<ul style="list-style-type: none"> • count in multiples of 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 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers 	<p>The pupil can count backwards in thousands from 2500 to include negative numbers.</p> <p>The pupil can reduce any four digit number to zero by subtracting the appropriate number of thousands, hundreds, tens and ones.</p> <p>The pupil can solve problems such as 'Arrange the digit cards 1, 4, 5 and 8 to make the number closest to 6000' and can justify their choice using the language of place value.</p> <p>The pupil can solve problems in the context of measurement such as ordering the lengths of rivers.</p> <p>The pupil can solve problems such as 'Write in order of size: the number of people watching Arsenal play at the Emirates stadium; the number of cubic centimetres in a cubic metre and the distance in miles to the moon'.</p> <p>The pupil can round 8074 to the nearest 50.</p> <p>The pupil can solve problems such as 'I am a number between 3000 and 4000. I am a multiple of 25 and of 9. When I am rounded to the nearest hundred my digits add to 7. What number am I?'</p>	<ul style="list-style-type: none"> • count in multiples of 1000 • find 1000 more or less than a given number • order and compare numbers beyond 1000 identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers
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<p>Term 1 3 weeks</p> <p>Additive Reasoning</p> <p>On Going Skills:</p>	<ul style="list-style-type: none"> • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why • estimate, compare and calculate different measures, including money in pounds and pence • interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs 	<p>The pupil can calculate $6078 + 1934$ and $6078 - 1934$, choosing between a variety of mental methods or a more formal written layout.</p> <p>The pupil can explain using manipulatives that addition and subtraction are inverse operations.</p> <p>The pupil can check their answer to $478 - 133$ by rounding or inverse operations and explain why they chose that method.</p> <p>The pupil can solve problems such as 'Sarah buys five pens at £1.25 each, three pencils at 38p each and a ruler for 85p. How much change does she get from £10?'</p> <p>The pupil can add a sequence of numbers mentally such as $243 + 179 + 606 + 192$.</p> <p>The pupil can solve calculation problems such as $786 + 247$ by considering the numbers involved and choosing from a variety of mental or written methods.</p> <p>The pupil can solve problems such as 'I am thinking of two numbers. Their sum is 387 and their difference is 107. What are the numbers?'</p>	<ul style="list-style-type: none"> • add and subtract numbers with up to 4 digits using the formal written methods • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why • estimate, compare and calculate different measures, including money in pounds and pence • interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
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<p>Term 2 3 weeks</p> <p>Multiplicative Reasoning</p> <p>On Going Skills:</p>	<ul style="list-style-type: none"> • count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12×12 • use place value, known and derived facts to multiply and divide mentally, • including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling and harder correspondence problems which n objects are connected to m objects 	<p>The pupil can identify whether numbers are in more than one of the sequences of 6, 7, 9, 25 and others with which they are familiar.</p> <p>The pupil can respond promptly and correctly to any question such as 'I am thinking of two numbers. They multiply to give 72 and have a difference of 1. What are they?'</p> <p>The pupil can work out 345×6 mentally by calculating $300 \times 6 = 1800$, $40 \times 6 = 240$ and $5 \times 6 = 30$ to get 2070.</p> <p>The pupil can calculate $60 \times 500 \times 30 \times 1 = 900,000$.</p> <p>The pupil can work out $8 \times 4 \times 7 \times 5$ by rearranging to get $4 \times 7 \times 8 \times 5 = 4 \times 7 \times 40 = 4 \times 280 = 800 + 320 = 1120$.</p> <p>The pupil can solve problems such as finding the number with the most factors below 30.</p> <p>The pupil can explain why factor pairs work to make calculations easier.</p> <p>The pupil can solve problems such as 'Three cakes are shared equally between ten children. How much do they have each?'</p>	<ul style="list-style-type: none"> • count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12×12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • use factor pairs in mental multiplication • solve problems involving multiplying and adding, including using the distributive law
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<p>Term 2</p> <p>3 weeks</p> <p>Geometric Reasoning</p>	<ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify acute and obtuse angles and compare and order angles up to two right angles by size identify lines of symmetry in 2-D shapes presented in different orientations 		<ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify acute and obtuse angles and compare and order angles up to two right angles by size identify lines of symmetry in 2-D shapes presented in different orientations
<p>Number Sense</p>	<ul style="list-style-type: none"> count in multiples of 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 identify, represent and estimate numbers using different representations round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers 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>The pupil can solve problems such as 'Arrange the digit cards 1, 4, 5 and 8 to make the number closest to 6000' and can justify their choice using the language of place value.</p> <p>The pupil can explain why Roman numerals are not a place value system and how zero makes a place value system work.</p>	<ul style="list-style-type: none"> count in multiples of 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 identify, represent and estimate numbers using different representations round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers 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>Additive Reasoning</p>	<ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why estimate, compare and calculate different measures, including money in pounds and pence interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs 		<ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why estimate, compare and calculate different measures, including money in pounds and pence interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs

<p>Number Sense</p>	<ul style="list-style-type: none"> • count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ • 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 • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • convert between different units of measure [for example, kilometre to metre; hour to minute] 	<p>The pupil can sort a set of representations of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ into two groups according to which fraction they represent and add further items to each group.</p> <p>The pupil can draw a 4 by 6 rectangle and use it to illustrate several families of equivalences, explaining why certain fractions cannot be shown using the rectangle.</p> <p>The pupil can solve problems such as 'Five cards form one third of my set. How many are there in the whole set?' by multiplying by three.</p> <p>The pupil can recognise common factors between the numerator and denominator of a fraction and divide to simplify the fraction.</p> <p>The pupil can explain why dividing ones by ten or one hundred results in tenths or hundredths and how this might extend into thousandths.</p> <p>The pupil can continue the sequence $\frac{1}{100}$, $\frac{7}{100}$, $\frac{13}{100}$ and write the terms as tenths when appropriate and draw a 10 by 10 square to demonstrate that one hundredth of it is one square and one-tenth of it is ten squares. They deduce one tenth of the ten squares is one hundredth and relate it to other contexts such as measurement and money.</p> <p>The pupil can extend writing $\frac{6}{10}$ and $\frac{60}{100}$ as 0.6 to converting $\frac{3}{5}$ to tenths and so $\frac{3}{5} = 0.6$ as well. They write $\frac{1}{4}$ as 0.25, $\frac{1}{2}$ as 0.5 and $\frac{3}{4}$ as 0.75. They can deduce that</p>	<ul style="list-style-type: none"> • count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ • 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 • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places
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$1/8 = 0.125$ and that $3/8$ is 0.375 .

The pupil can give a general rule for identifying the smaller of two unit fractions and the larger of two fractions with the same denominator, explaining why they work.

The pupil can calculate $3/9 + 8/9 = 11/9$ and $11/9 - 8/9 = 3/9$. They realise that $11/9$ is greater than one and can suggest ways to record this.

The pupil can interpret $6/7$ as $6 \times 1/7$ and $1/7$ of 6 and $6 \div 7$.

The pupil can list the numbers to one decimal place that round to a number such as 4, explaining how they know and why 3.5 is included but 4.5 is not included.

The pupil can write instructions for ascertaining the larger number out of 4.28 and 4.08.

The pupil can make up problems involving harder fractions and numbers of sweets and group them into easy, medium and hard problems.

The pupil can make up problems involving harder fractions and money and group them into easy, medium and hard problems.

Multiplicative Reasoning	<ul style="list-style-type: none"> • count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12×12 • use place value, known and derived facts to multiply and divide mentally, • including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling and harder correspondence problems such as n objects are connected to m objects. • 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 • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 		<ul style="list-style-type: none"> • count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12×12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • use factor pairs • solve problems involving multiplying and adding, including using the distributive law
Geometric Reasoning	<ul style="list-style-type: none"> • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • describe positions on a 2-D grid as coordinates in the first quadrant • describe movements between positions as translations of a given unit to the left/right and up/down • plot specified points and draw sides to complete a given polygon 		<ul style="list-style-type: none"> • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes

<p>Number Sense</p>	<ul style="list-style-type: none"> • count in multiples of 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 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers • convert between different units of measure [for example, kilometre to metre; hour to minute] • read, write and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs 	<p>The pupil can solve problems such as 'Arrange the digit cards 1, 4, 5 and 8 to make the number closest to 6000' and can justify their choice using the language of place value.</p> <p>The pupil can explain the connection between analogue clocks and 12- and 24-hour clock times. The pupil can work out how many days they have been alive.</p> <p>The pupil can explain the difference between £2.06 and £2.60, with reference to both money and the decimal system. The pupil can apply their knowledge of multiplying by 10, 100 and 1000 and the relationship between metric units to convert from larger to smaller units and begin to explore how to do the reverse process.</p> <p>The pupil can write down the times for a day trip by bus or train to the nearest large town in all the three formats.</p>	<ul style="list-style-type: none"> • count in multiples of 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 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers • convert between different units of measure [for example, kilometre to metre; hour to minute] • read, write and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
<p>Additive Reasoning</p>	<ul style="list-style-type: none"> • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why • interpret and present discrete and continuous data using bar charts and time graphs • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs • solve simple measure and money problems involving fractions and decimals to two decimal places • estimate, compare and calculate different measures, including money in pounds and pence 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why • interpret and present discrete and continuous data using bar charts and time graphs • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and

			<p>simple line graphs</p> <ul style="list-style-type: none"> • solve simple measure and money problems involving fractions and decimals to two decimal places • estimate, compare and calculate different measures, including money in pounds and pence
<p>Number Sense</p>	<ul style="list-style-type: none"> • count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ • 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 • round decimals with one decimal place to the nearest whole number compare numbers with the same number of decimal places up to two decimal places • convert between different units of measure [for example, kilometre to metre; hour to minute] 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • recognise and show, using diagrams, families of common equivalent fractions • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ • 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 • round decimals with one decimal place to the nearest whole number compare numbers with the same number of decimal places up to two decimal places • convert between different units of measure [for example, kilometre to metre; hour to minute]

Multiplicative Reasoning	<ul style="list-style-type: none"> • count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12×12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • multiply two-digit and three-digit numbers by a one-digit number using formal written layout • solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling and harder correspondence problems such as n objects are connected to m objects • 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 • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 	<p>The pupil can calculate 6×283 using a formal written layout such as the grid method and relate it to the formal methods of long multiplication.</p> <p>The pupil can calculate $1698 \div 6$ using a formal written layout such as chunking and relate it to the formal methods of long division.</p>	<ul style="list-style-type: none"> • count in multiples of 6, 7, 9, 25 and 1000 • recall multiplication and division facts for multiplication tables up to 12×12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs • multiply two-digit and three-digit numbers by a one-digit number using formal written layout • solve problems involving multiplying and adding, including using the distributive law • 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 • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days
Geometric Reasoning	<ul style="list-style-type: none"> • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares 		<ul style="list-style-type: none"> • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry

Title	Core Skills	Challenge	Target Tracker Statements
<p>Term 1 (3 weeks)</p> <p>Number Sense</p> <p>On Going Skills:</p>	<ul style="list-style-type: none"> • read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all 	<p>The pupil can reduce any six-digit number to zero by subtracting the appropriate number of each of the appropriate powers of 10.</p> <p>The pupil can solve problems involving timelines from the origins of</p>	<ul style="list-style-type: none"> • read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical

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	<p>of the above</p> <ul style="list-style-type: none"> multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with two decimal places to the nearest whole number and to one decimal place read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) solve problems involving converting between units of time 	<p>humankind.</p> <p>The pupil can solve problems such as 'Does the sequence $-11, -6, -1 \dots$ pass through 91?'</p> <p>The pupil can write the number of megabytes on a memory stick in words and numerals.</p> <p>The pupil can identify the largest multiple of 9 that rounds to 250,000 to the nearest 100.</p> <p>The pupil can solve problems such as 'What sequence has the third term 0.3 and the seventh term -1.3?'</p>	<p>problems that involve all of the above</p> <ul style="list-style-type: none"> round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
<p>Term 1 3 weeks</p> <p>Additive Reasoning</p> <p>On Going Skills:</p>	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables 	<p>The pupil can solve problems mentally such as $45,762 + ? = 105,761$.</p> <p>The pupil can write a variety of calculations derived from $15 + 63 = 78$ and generalise to describe further calculations.</p> <p>The pupil can make up problems involving several steps and prompting different calculation strategies such as 'It is 560 km from Penzance to Manchester. Ali drives 315 km and notes that he is 112 km from Birmingham. How far is it from Birmingham to Manchester?'</p>	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables

<p>Term 2 3 weeks</p> <p>Multiplicative Reasoning</p> <p>On Going Skills:</p>	<ul style="list-style-type: none"> • identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • multiply numbers up to 4 digits by a one-digit number using a formal written method • multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • solve problems involving multiplication and division including using their knowledge of factors and multiples • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling m objects 	<p>The pupil can solve problems such as 'Use the numbers 6, 3, 7, 9, 25 and 50 once each, and use any of the four operations to make the target number of 573'.</p> <p>The pupil can calculate $0.012 \times 600 = 7.2$.</p> <p>The pupil can explain how they can use partitioning to work out 452×12.</p> <p>The pupil can test whether 67 is prime by testing its divisibility by the prime numbers smaller than the square root of 67.</p> <p>The pupil can interpret the equals sign as indicating that the expressions on each side are equivalent, whether they involve numbers or are missing number problems.</p> <p>The pupil can make up problems such as 'I am thinking of a two-digit number. The difference between its digits is a cube number and the tens digit is a square number. It is a multiple of 13. What is the number?' with a unique answer.</p> <p>The pupil can make up problems involving several steps and prompting different calculation strategies such as 'Use the numbers 5, 1, 6, 7, 25 and 75 once each and any combination of the four operations to make the number 612'.</p>	
<p>Term 2 2 weeks</p> <p>Geometric Reasoning</p>	<ul style="list-style-type: none"> • identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees ($^{\circ}$) • identify: <ul style="list-style-type: none"> › angles at a point and one whole turn (total 360°) › angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) • › other multiples of 90° use the properties of rectangles to deduce related facts and find missing lengths and angles 		

	<ul style="list-style-type: none"> distinguish between regular and irregular polygons based on reasoning about equal sides and angles 		
Number Sense	<ul style="list-style-type: none"> read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above read Roman numerals to 1000 (M) and recognise years written in Roman numerals multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with two decimal places to the nearest whole number and to one decimal place read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) solve problems involving converting between units of time 	<p>The pupil can explain why calculation with large numbers is difficult with Roman numerals.</p> <p>The pupil can solve problems such as identifying the biggest change in temperature between day and night on the planets in the solar system.</p>	
Additive Reasoning	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving number up to three decimal places use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling measure and calculate the perimeter solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables 		

Number Sense	<ul style="list-style-type: none"> multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 compare and order fractions whose denominators are all multiples of the same number 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, $\frac{2}{5} + \frac{3}{5} = \frac{5}{5} = 1\frac{1}{5}$] read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents 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 <p>identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths</p>		
Multiplicative Reasoning	<ul style="list-style-type: none"> identify multiples and factors, including finding all factor pairs know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply numbers up to 4 digits by a one-digit number using a formal written method multiply and divide numbers mentally drawing upon known facts divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ and those with a denominator of a multiple of 10 or 25 use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling 		

Geometric Reasoning	<ul style="list-style-type: none"> • identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees ($^{\circ}$) • identify: <ul style="list-style-type: none"> › angles at a point and one whole turn (total 360°) › angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) › other multiples of 90° • use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles • identify, describe and present the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed 		
Number Sense	<ul style="list-style-type: none"> • read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems that involve all of the above • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • compare and order fractions whose denominators are all multiples of the same number • 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] • read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places • solve problems involving number up to three decimal places • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • solve problems involving converting between units of time 		

Additive Reasoning	<ul style="list-style-type: none"> • add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] • add and subtract fractions with the same denominator and denominators that are multiples of the same number • solve problems involving number up to three decimal places • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling • solve problems involving converting between units of time • solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables 		
Number Sense	<ul style="list-style-type: none"> • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • compare and order fractions whose denominators are all multiples of the same number • 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] • read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • 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 • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) 		

Multiplicative Reasoning	<ul style="list-style-type: none"> • identify multiples and factors, including finding all factor pairs and common factors of two numbers • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19 • 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 • multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates • identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25 • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • solve problems involving converting between units of time 	<p>The pupil can make up problems such as 'Helen cycles 40 km in two hours. How far would she cycle in 20 minutes at the same speed?'</p>	
Geometric Reasoning	<ul style="list-style-type: none"> • use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles • 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 • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square 		

	<p>metres (m²) and estimate the area of irregular shapes</p> <ul style="list-style-type: none">• estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]		
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