

# Year Six

## Mathematics



		STATEMENTS	Date 1	Date 2	Date 3	COMMENTS
<b>NUMBER</b>	Number and Place Value	I can read numbers to at least 10,000,000 and determine the value of each digit.				
		I can write numbers to at least 10,000,000 and determine the value of each digit.				
		I can order numbers to at least 10,000,000 and determine the value of each digit.				
		I can compare numbers to at least 10,000,000 and determine the value of each digit.				
		<b>I can demonstrate an understanding of place value, including large numbers and decimals.</b>				
		I can round any whole number to a required degree of accuracy.				
		I can use negative numbers in context, and calculate intervals across zero.				
		I can solve number and practical problems that involve all of the above.				
	Addition and Subtraction	I can add whole numbers with more than four-digits, including using formal written methods (columnar +).				
		I can subtract whole numbers with more than four-digits, including using formal written methods (columnar -).				
		I can + and – numbers mentally with large numbers.				
		I can use rounding to check answers and determine, in the context of problems, levels of accuracy.				
		I can solve + and – multi-step problems in contexts, deciding which operations and methods to use and why.				
	Addition, Subtraction, Multiplication and Division	I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal method.				
		I can divide numbers up to 4 digits by a two-digit number using the formal written method of long multiplication. I can interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context.				
		I can divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.				
		I can perform mental calculations, including with mixed operations and large numbers.				
		I can identify common factors.				
		I can identify common multiples.				
		I can identify prime numbers.				
		I can use my knowledge of the order of operations to carry out calculations involving the four operations.				
		I can solve problems involving +, -, x and ÷.				
		I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.				
	<b>I can calculate mentally, using efficient strategies such as manipulating expressions using commutative and distributive properties to simplify the calculation.</b>					
	<b>I can use formal methods to solve multi-step problems</b>					

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		STATEMENTS	Date 1	Date 2	Date 3	COMMENTS
NUMBER (continued)	Fractions (including decimals)	I can use common factors to simplify fractions				
		I can use common multiples to express fractions in the same denomination.				
		I can compare and order fractions, including fractions $>1$ .				
		I can add fractions with different denominators and mixed numbers, using the concept of equivalent fractions.				
		I can subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.				
		I can multiply simple fractions of proper fractions, writing the answer in its simplest form.				
		I can divide proper fractions by whole numbers.				
		I can associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.				
		I can identify the value of each digit in numbers given to three decimal places.				
		I can multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.				
		I can multiply one-digit numbers with up to two decimal places by whole numbers.				
		I can use written division methods in cases where the answer has up to two decimal places.				
		I can solve problems which require answers to be rounded to specified degrees of accuracy.				
		I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.				
		<b>I can recognise the relationship between fractions, decimals and percentages and can express them as equivalent quantities.</b>				
<b>I can calculate using fractions, decimals or percentages</b>						
RATIO & PROPORTION	I can solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts.					
	I can solve problems involving the calculation of percentages and the use of percentages for comparisons.					
	I can solve problems involving similar shapes where the scale factor is known or can be found.					
	I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.					
ALGEBRA	I can use simple formulae.					
	I can generate and describe linear number sequences.					
	I can express missing number problems algebraically.					
	I can find pairs of numbers that satisfy an equation with two unknowns.					
	I can enumerate possibilities of combinations of two variables.					
	<b>I can substitute values into a simple formula to solve problems.</b>					
MEASUREMENT	I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.					
	I can use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three places.					
	I can convert between miles and kilometres.					
	I recognise that shapes with the same perimeter can have different areas and vice versa.					
	I recognise when it is possible to use formulae for area and volume of shapes.					

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		I can calculate the area of parallelograms.					
		I can calculate the area of triangles.					
		I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm <sup>3</sup> ) and extending to other units (m <sup>3</sup> and km <sup>3</sup> ).					
		<b>I can calculate with measures.</b>					
<b>GEOMETRY</b>	Properties of shapes	I can draw 2-D shapes using given dimensions and angles.					
		I recognise, describe and build simple 3-D shapes, including making nets.					
		I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in triangles, quadrilaterals, and regular polygons.					
		I can illustrate and name parts of circles, including radius, diameter and circumference. I know the circumference is twice the radius.					
		I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.					
		<b>I can use mathematical reasoning to find missing angles.</b>					
	Pos. and Direction	I can describe positions on the full coordinate grid (all four quadrants).					
		I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.					
	<b>STATS.</b>		I can interpret and construct pie charts and use these to solve problems.				
			I can interpret and construct line graphs and use these to solve problems.				
		I can calculate and interpret the mean as an average.					

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