

Mathematics Target Sheet -Year 6

Year 6 Expectations

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Number and Place Value	Counting Comparing Numbers Identifying, Representing and Estimating Numbers Reading and Writing Numbers	use negative numbers in context, and calculate intervals across zero read, write, order and compare numbers up to 10 000000 and determine the value of each digit
	Understanding Place Value Rounding Problem Solving	<i>read, write, order and compare numbers up to 10 000000 and determine the value of each digit</i> round any whole number to a required degree of accuracy solve number and practical problems that involve all of the above
Number: Addition and Subtraction	Number bonds	
	Mental Calculations	perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations
	Written Methods	
	Inverse Operations, Estimating and Checking Answers Problem Solving	use estimation 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 addition, subtraction, multiplication and division
Number: Multiplication and Division	Multiplication and Division Facts	
	Mental Calculation	perform mental calculations, including with mixed operations and large numbers
	Written Calculation	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
	Properties of Numbers Order of Operations Inverse Operations, Estimating and Checking Results	identify common factors, common multiples and prime numbers use their knowledge of the order of operations to carry out calculations involving the four operations use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
	Problem Solving	solve problems involving addition, subtraction, multiplication and division
Number: Fractions	Counting in Fractional Steps	
	Recognising Fractions	
	Comparing Fractions	compare and order fractions, including fractions >1 identify the value of each digit in numbers given to three decimal places
	Comparing Decimals	solve problems which require answers to be rounded to specified degrees of accuracy

	Rounding including Decimals	
	Equivalence (Including Fractions, Decimals and Percentages)	<p>use common factors to simplify fractions; use common multiples to express fractions in the same denominator</p> <p>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)</p> <p>recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</p>
	Addition and Subtraction of Fractions	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
	Multiplication and Division of Fractions	
	Multiplication and Division of Decimals	<p>multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)</p> <p>multiply one-digit numbers with up to two decimal places by whole numbers</p> <p>divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)</p> <p>multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places</p> <p>identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places</p> <p>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)</p> <p>use written division methods in cases where the answer has up to two decimal places</p>
	Problem Solving	
	Ratio and Proportion	<p>solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison</p> <p>solve problems involving similar shapes where the scale factor is known or can be found</p> <p>solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</p>
Measurement	Comparing and Estimating	calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3 .
	Measuring and Calculating	<p>solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</p> <p>recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>calculate the area of parallelograms and triangles</p> <p>calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [e.g. mm^3 and km^3].</p> <p>recognise when it is possible to use formulae for area and volume of shapes</p>
	Telling the Time	
	Converting	<p>use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places</p> <p>solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</p> <p>convert between miles and kilometres</p>
Geometry:	Identifying Shapes and their Properties	<p>recognise, describe and build simple 3-D shapes, including making nets</p> <p>illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</p>
	Drawing and Constructing	draw 2-D shapes using given dimensions and angles

	<p>Comparing and Classifying</p> <p>Angles</p> <p>Position, Direction and Movement</p> <p>Pattern</p>	<p>compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</p> <p>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</p> <p>describe positions on the full coordinate grid (all four quadrants)</p> <p>draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</p>
<p>Statistics</p>	<p>Interpreting, Constructing and Presenting Data</p> <p>Solving Problems</p>	<p>interpret and construct pie charts and line graphs and use these to solve problems</p> <p>calculate and interpret the mean as an average</p>
<p>Algebra</p>	<p>Equations</p> <p>Formulae</p> <p>Sequences</p>	<p>express missing number problems algebraically</p> <p>find pairs of numbers that satisfy number sentences involving two unknowns</p> <p>enumerate all possibilities of combinations of two variables</p> <p>use simple formulae</p> <p><i>recognise when it is possible to use formulae for area and volume of shapes</i></p> <p>generate and describe linear number sequences</p>