

Band 6

Number and Place Value	Addition and subtraction Multiplication and division	Fractions, Decimals, Percentage and Ratio.	Measurement	Properties of space	Position and direction	Statistics
Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. Round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero. Solve number problems and practical problems that involve all of the above.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication. Find pairs of numbers that satisfy an equation with 2 unknowns. Solve a variety of number problems using formulae and algebraic equations. Identify common factors, common multiples and prime numbers with increasingly large numbers. Divide numbers up to 4 digits by a two-digit whole number. Using the efficient written method of expanded and long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context Perform mental calculations, including with mixed operations and large numbers.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Associate a fraction with division and calculate decimal equivalents of common fractions such as $\frac{1}{2}$ 1.4 and $\frac{1}{5}$ Compare and order fractions, including fractions >1 associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$). Compare and order any set of fractions, proper, improper and mixed numbers including those with different denominators. Using the idea of equivalence. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Express a quotient as a fraction, decimal or rounded to context. Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$). Divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$) 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. Divide proper fractions by a whole number ($\frac{1}{3}$ divided by 2 = $\frac{1}{6}$) Multiply one-digit numbers with up to two decimal places by whole numbers. Use written long division methods in cases where the answer has up to two	Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate. 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 three decimal places. Convert between miles and kilometres Recognise when it is possible to use formulae to calculate area. Recognise that shapes with the same areas	Recognise, describe and build simple 3-D shapes, including making nets. Accurately draw 2D shapes using given angles and dimensions. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. Illustrate and name parts of circles, including radius, diameter and circumference and know that diameter is twice the radius. Find unknown angles where they meet at a point, are on a straight line, and are vertically opposite. <i>Solve problems using my knowledge of circle properties.</i>	Describe positions on the full coordinate grid (all four quadrants). Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. Predict missing coordinates using the properties of shapes.	Interpret and construct pie charts and line graphs(including conversation graphs) and use these to solve problems including ones I have constructed myself. Calculate and interpret the mean as an average. <i>Calculate the probability of an independent event.</i> <i>Read and interpret linear and proportional graphs (speed)</i>

Generate and describe linear number sequences. Make generalizations about number patterns and express them algebraically. I can identify square roots and cube roots which give integer solutions (whole number answers) I can identify the region for solution of square roots (not square numbers) and use this as a starting point for trial and improvement.	Check the reasonableness of my answer in all calculations. Identify common factors, common multiples and prime numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems and investigations involving addition, subtraction, multiplication and division from a large range of contexts. Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. Explore the order of operations using brackets. Solve real life and financial problems (comparing holiday packages or working out household bills)	decimal places. Solve problems which require answers to be rounded to specified degrees of accuracy. Solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Solve problems involving similar shapes where the scale factor is known or can be found. Express missing number problems algebraically. Use simple formulae expressed in words. Generate and describe linear number sequences. Find pairs of numbers that satisfy number sentences involving two unknowns. Identify that a problem can be written as a ratio and solve problems using this relationship. Divide a quantity in a given ratio (recognising the proportion as a fraction of the whole) I can solve more complex percentage problems in context such as percentage deduction. Link % to calculating simple angles in a pie chart.(recognise that 50% = 180 Solve more complex problems using a unitary method ie scaling down 1% and up again. Recognise what degree of accuracy is appropriate when rounding decimals. Recognise and explore the relationship of multiplying by a whole number and dividing by its reciprocal Multiply more complex pairs of proper fractions.(3/5 x 4/7=)	can have different perimeters and vice versa Recognise when it is necessary to use the formulae for area and volume of shapes. Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm³) and cubic metres (m³) and extending to other units, such as mm³ and km³. Understand compound units for speed and use them in context for eg science experiments. Calculate area and perimeter of compound shapes including parallelograms and triangles.	Algebra Solve problems involving the relative sizes of two quantities, including similarity Express missing number problems algebraically. Solve problems involving unequal sharing and grouping.
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