

Understanding Numbers and the Number System, Steps 28 to 30

Strand	Statement	28	29	30	+
Number, place value and rounding	Count forwards and 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				
	Read, write and order and compare numbers to be at least 1,000,000 & determine the value of each digit				
	Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10 000 & 100 000				
	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals				
	Solve number and practical problems that involve all of the above				
Addition and Subtraction	Solve addition & subtraction multi-step problems in contexts, deciding which operations & methods to use & why				
	Add and subtract numbers mentally with increasingly large numbers				
	Add and subtract whole numbers with more than 4 digits including formal written methods (columnar addition and subtraction)				
	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy				
Multiplication and Division-	Identify all multiples and factors including finding all factor pairs of a number and common factors of 2 numbers				
	Know and use the vocabulary of prime numbers , prime factors and composite (non -prime numbers)				
	Establish where a number up to 100 is prime and recall prime numbers up to 19				
	Multiply & divide numbers mentally drawing upon known facts				
	Multiply numbers up to 4 digits by a 1 digits or 2 digit numbers using a formal written method including long multiplication for 2 digit numbers				
	Divide numbers up to 4 digit by a 1 digit number using formal written methods of short division & interpret remainders appropriately for the context				
	Multiply and divide whole numbers & those involving 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 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 simple fractions and problems including simple rates				
	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes				

Fractions, decimals and percentages	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.				
	Read and write decimal numbers as fractions (e.g. 0.71 = 71/100)				
	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents)				
	Recognise mixed numbers and improper fractions and convert from one form to the other and write a mathematical statements				
	Compare and order fractions whose denominators are all multiples of the same number				
	Add and subtract fractions with the same denominator and multiples of the same number				
	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams				
	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				
	Recognise the per cent symbol (%) and understand that per cent relates to 'number parts per hundred', and write percentages as a fraction with denominator hundred, as a decimal fraction				
	Solve problems which require knowing percentage and decimal equivalence of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25				
Solve problems involving number up to three decimal places					

Shape, Space and Measures, Steps 28 to 30

Strand	Statement	28	29	30	+
Measurement	Convert between different units of metric measure (e.g. km/m: cm/m: cm/mm: g/kg: l/ml)				
	Understand and use approximate equivalences between metric units & common imperial units such as inches, pounds and pints				
	Estimate volume (e.g. using 1cm ³ blocks to build cubes & cuboids) & capacity (e.g. using water)				
	<u>Perimeter</u> Measure and calculate the perimeter if composite rectilinear shapes in cm & m				
	<u>Area</u> Calculate & compare the area of rectangles (including squares & including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes				
	<u>Time</u> Solve problems involving converting between unites of time				

Geometry: Properties of Shape	Identify 3D shapes , including cubes and cuboids, from 2D representations			
	Use the properties of rectangles to deduce related facts & find missing lengths & angles			
	Distinguish between regular and irregular polygons based on reasoning about equal sides & angles			
	Know angles are measures in degrees; estimate & compare acute; obtuse and reflex angles			
	Identify: Angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) Angles at a point & one whole turn (360°) Other multiples of 90°			
	Draw given angles and measure them in degrees			
Geometry: Position, direction and motion	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.			
Statistics	Complete read and interpret information in: Tables, including timetables			
	Solve comparison, sum and difference problems using information presented in a line graph			