

Year 5

Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Measurements	Properties of Shape	Position and Direction
Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit e.g. what is the value of the '7' in 276,541? Find the difference between the largest and smallest whole numbers that can be made from using three digits	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	Compare and order fractions whose denominators are all multiples of the same number	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	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
Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	Add and subtract numbers mentally with increasingly large numbers	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	Identify and name equivalent fractions of a given fraction, represented visually, including tenths and hundredths	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
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	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	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	Write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1 \frac{1}{5}$	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Estimate volume e.g. using 1 cm ³ blocks to build cuboids (including cubes) and capacity e.g. using water	Draw given angles, and measure them in degrees (°) Identify angles at a point and one whole turn (total 360°)	Statistics Solve comparison, sum and difference problems using information presented in a line graph
Read Roman numerals to 1000 (M) and recognise years written in Roman numerals	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Multiply and divide numbers mentally drawing upon known facts	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Solve problems involving converting between units of time	Identify angles at a point on a straight line and 1/2 a turn (total 180°)	Complete, read and interpret information in tables, including timetables
Demonstrate an understanding of place value including decimals e.g. $28.13 = 28 + ? + 0.03$. (Number and Place Value)		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 proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Use all four operations to solve problems involving measure e.g. length, mass, volume, money using decimal notation, including scaling	Identify other multiples of 90°	

		<p>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p> <p>Recognise and use square numbers and the notation for squared (2)</p>	<p>Read and write decimal numbers as fractions e.g. $0.71 = 71/100$, $8.09 = 8 + 9/?$</p> <p>Round decimals with two decimal places to the nearest whole number and to one decimal place</p>	<p>Calculate and compare the area of rectangles (including squares), and including using standard units, square cm, (cm^2) and square metres (m^2), and estimate the area of irregular shapes.</p>	<p>Use the properties of rectangles to deduce related facts and find missing lengths and angles</p>	
		<p>Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</p>	<p>Read, write, order and compare numbers with up to three decimal places</p>		<p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</p>	
		<p>Recognise and use cube numbers and the notation for cubed (3)</p>	<p>Solve problems involving number up to three decimal places</p>			
		<p>Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</p>	<p>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>			
		<p>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</p>	<p>Solve problems which require knowing percentage and decimal equivalents of $1/2$, $1/4$, $1/5$, $2/5$, $4/5$ and those fractions with a denominator of a multiple of 10 or 25</p>			
			<p>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts e.g. one piece of cake that has been cut into 5 equal slices can be expressed as $1/5$ or 0.2 or 20% of the whole cake. (Fractions)</p>			