Year 5 Mathematics National Curriculum/Target Tracker Statements

Menu	Band 4	Band 5	Band 6
Counting	•count in multiples of 6, 7, 9, 25 and 1000 •find 1000 more or less than a given number count backwards through zero to include negative numbers	•count forwards or 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	•use negative numbers in context, and calculate intervals across zero
Place Value	•recognise the place value of each digit in a four-digit number •order and compare numbers beyond 1000 •round any number to the nearest 10, 100 or 1000	•read, write, order and compare numbers up to 1 000 000 and determine the value of each digit •round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	•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
Representing number	•identify, represent and estimate numbers using different representations •read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	•read Roman numerals to 1000 (M) and recognise years written in Roman numerals •recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	
Number facts (+/-)			
Mental +/-		•add and subtract numbers mentally with increasingly large numbers	•perform mental calculations, including with mixed operations and large numbers
Written +/-	•add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	•add and subtract whole numbers with more than 4 digits, including using formal written methods	
Problems +/-	•estimate and use inverse operations to check answers to a calculation •solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	•use rounding 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	
Number facts (x/÷)	•recall multiplication and division facts for multiplication tables up to 12 × 12	•identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers •know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers •establish whether a number up to 100 is prime and recall prime numbers up to 19	•identify common factors, common multiples and prime numbers
Mental (x/÷)	•use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers •recognise and use factor pairs and commutatively in mental calculations	•multiply and divide numbers mentally drawing upon known facts •multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	•perform mental calculations, including with mixed operations and large numbers
Written (x/÷)	•multiply two-digit and three-digit numbers by a one-digit number using formal written layout	•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 •divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret	•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 long division, and interpret

		remainders appropriately for the context	remainders as whole number remainders, fractions, or by rounding, as appropriate for the context •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 context
Problems (x/÷)	•solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	•solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes •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 by simple fractions and problems involving simple rates	•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 involving addition, subtraction, multiplication and division •use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
Recognising fractions	•count up and down in hundredths; •recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	•recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number	
Comparing fractions	•recognise and show, using diagrams, families of common equivalent fractions	•compare and order fractions whose denominators are all multiples of the same number •identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	•use common factors to simplify fractions •use common multiples to express fractions in the same denomination •compare and order fractions, including fractions > 1
Finding fractions of quantities	•solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number		
Fraction calculations	•add and subtract fractions with the same denominator	•add and subtract fractions with the same denominator and denominators that are multiples of the same number •multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	•add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions •multiply simple pairs of proper fractions, writing the answer in its simplest form •divide proper fractions by whole numbers
Decimals as fractional amounts	•recognise and write decimal equivalents of any number of tenths or hundredths •recognise and write decimal equivalents to ¼, ½ and ¾ •find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	•read and write decimal numbers as fractions	•associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction •identify the value of each digit in numbers given to three decimal places
Ordering decimals		•recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents •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	
Calculating with decimals			•multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places •multiply one-digit number with up to two decimal places by whole numbers

			•use written division methods in cases where the answer has up to two decimal places
Percentages		•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	•solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
Fraction problems	•solve simple measure and money problems involving fractions and decimals to two decimal places	•solve problems involving number up to three decimal places •solve problems which require knowing percentage and decimal equivalents of ½ , ¼ , 1/5 , 2/5 , 4/5 and those fractions with a denominator of a multiple of 10 or 25	•solve problems which require answers to be rounded to specified degrees of accuracy •recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Ratio & Proportion			•solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts •solve problems involving similar shapes where the scale factor is known or can be found •solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
Algebra			•use simple formulae •generate and describe linear number sequences •express missing number problems algebraically •find pairs of numbers that satisfy an equation with two unknowns •enumerate possibilities of combinations of two variables.
Measures	•Convert between different units of measure estimate, compare and calculate different measures, including money in pounds and pence	•convert between different units of metric measure •understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints •estimate volume and capacity	•solve problems involving the calculation and conversion of units of measure, using decimal notation up 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 up to three decimal places convert between miles and kilometres
Mensuration	•measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares	•measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres •calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	•recognise that shapes with the same areas can have different perimeters and vice versa •recognise when it is possible to use formulae for area and volume of shapes •calculate the area of parallelograms and triangles •calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units.
Money		•use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	
Time	•Convert between different units of measure (e.g. Hours to minutes) •read, write and convert time between analogue and digital 12- and 24-hour clocks •solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to	•solve problems involving converting between units of time	

	days		
Shape vocabulary			**•illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius**
Properties of 2-d shape	**•compare and classify geometric shapes, including quadrilaterals and triangles, based on properties and sizes •identify lines of symmetry in 2-D shapes presented in different orientations •complete a simple symmetric figure with respect to a specific line of symmetry.**	**•compare and classify geometric shapes, including quadrilaterals and triangles, based on properties and sizes •identify lines of symmetry in 2-D shapes presented in different orientations •complete a simple symmetric figure with respect to a specific line of symmetry.**	**•draw 2-D shapes using given dimensions and angles compare and classify geometric shapes based on their properties and sizes**
Properties of 3-d shape			**•recognise, describe and build simple 3-D shapes, including making nets •find unknown angles in any triangles, quadrilaterals, and regular polygons**
Angles	**•identify acute and obtuse angles and compare and order angles up to two right angles by size**	**•know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles •draw given angles, and measure them in degrees (°) •identify angles at a point and one whole turn (total 360°); at a point on a straight line and ½ a turn (total 180°) •identify other multiples of 90°**	**•recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles**
Position & Direction	**•describe positions on a 2-D grid as coordinates in the first quadrant •describe movements between positions as translations of a given unit to the left/right and up/down •plot specified points and draw sides to complete a given polygon**	**•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**	**•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.**
Interpreting data	**•interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs**	**•complete, read and interpret information in tables, including timetables**	**•interpret and construct pie charts and line graphs calculate and interpret the mean as an average**
Extract info from data	**•solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs**	**•solve comparison, sum and difference problems using information presented in a line graph**	**•use pie charts and line graphs to solve problems**