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Mathematics Assessment Tracking Grids - Year Five

Working Towards									
Number and Place Value	I can read, write, order and compare numbers to at least 10,000 and determine the value of each digit								
	I can count forwards or backwards in steps of powers of 10 for any given number up to 10,000								
	I can interpret negative numbers in context, count backwards with positive and negative whole numbers including through 0								
	I can round any number up to 10,000 to the nearest 10, 100, 1000 and 10,000								
	I can solve simple practical and number problems involving place value as above								
	I can identify some Roman numerals up to 1000								
Addition and Subtraction	I can add and subtract whole numbers with up to 4 digits using formal written methods where appropriate								
	I can add and subtract numbers mentally, using known skills such as rounding and partitioning								
	I can use rounding to the nearest 10, 100 and 1000 to estimate an answer and use the inverse to check the answer to a calculation								
	I can solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why								

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Multiplication and Division	I can identify all factor pairs of a number								
	I can identify multiples								
	I understand what makes a number prime and can identify prime numbers up to 11								
	I can multiply numbers up to 3 digits by a two digit number using a formal written layout								
	I can multiply and divide numbers up to 12 x 12 mentally, including multiplying three or more numbers								
	I can divide numbers up to three digits by a one digit number, using formal written layout								
	I can multiply and divide whole numbers by 10, 100 and 1000 and identify the value of each digit								
	I can recognise and use square numbers and the correct notation								
	I can solve problems involving multiplication and division, including using my knowledge of factors, multiples and squares								
	I can solve two step problems involving the four operations and a combination of these, including understanding the meaning of the equals sign								
	I can solve problems involving multiplication and division, including those involving simple rates								

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Fractions	I can compare and order fractions whose denominators are all multiples of the same number (up to 12 x 12), with up to three fractions in a set								
	I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths								
	I can recognise mixed numbers and improper fractions and convert from one form to the other using pictorial representations to support								
	I can add and subtract fractions with the same denominator								
	I can multiply mixed numbers by whole numbers, supported by materials and diagrams								
	I can read and write decimal numbers as fractions up to tenths								
	I can recognise and use thousandths								
	I am beginning to recognise the percent symbol (%)								
	I can round decimals with two decimal places to the nearest whole number								
	I can read, write, order and compare with the same number of decimal places (up to three decimal places)								
	I can solve problems involving numbers with the same number of decimal places (up to three decimal places)								
	I can solve problems which require knowing percentage and decimal equivalents of ½, ¼ and ¾								

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Measurement	I can convert between some units of metric measure								
	I can measure and calculate the perimeter of composite rectilinear shapes, including by using squares								
	I can calculate the area of rectilinear shapes and estimate the area of irregular shapes using squares								
	I can estimate capacity using a variety of containers								
	I can solve problems involving converting between units of time								
	I can use all four operations to solve problems involving measurement								
Geometry - Properties of Shape	I can identify cubes from 2D representations								
	I know angles are measured in degrees and I can compare acute, obtuse and reflex angles								
	I can draw given angles, within accuracy of 5 degrees and measure them in degrees								
	I can identify: • Angles at a point and one whole turn • Angles on a straight line and ½ a turn								
	I can use the properties of triangles to find missing angles								
	I understand what the terms regular and irregular mean								

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Geometry - Position and Direction	I can describe the movements of a shape as translations, including left/right, up/down								
Statistics	I can solve comparison, sum and difference problems using information presented in a line graph where the problem is linked to the plotted points								
	I can complete, read and interpret information in simple tables								

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Expected									
Number and Place Value	I can read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit								
	I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000								
	I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero								
	I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000								
	I can solve number problems and practical problems that involve all of the above								
	I can read Roman numerals to 1000 (M) and recognise years written in Roman numerals								
Addition and Subtraction	I can add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)								
	I can add and subtract numbers mentally with increasingly large numbers								
	I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy								
	I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why								

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Mathematics Assessment Tracking Grids - Year Five

Multiplication and Division	I can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers								
	I know and can use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers								
	I can establish whether a number up to 100 is prime and recall prime numbers up to 19								
	I can 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								
	I can multiply and divide numbers mentally drawing upon known facts								
	I can 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								
	I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)								
	I can solve problems involving multiplication and division including using my knowledge of factors and multiples, squares and cubes								
	I can solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign								
	I can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates								

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Mathematics Assessment Tracking Grids - Year Five

Fractions (including decimals and percentages)	I can compare and order fractions whose denominators are all multiples of the same number								
	I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths								
	I can recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number								
	I can add and subtract fractions with the same denominator and denominators that are multiples of the same number								
	I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams								
	I can read and write decimal numbers as fractions [for example, 0.71 = 71/100]								
	I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents								
	I can round decimals with two decimal places to the nearest whole number and to one decimal place								
	I can read, write, order and compare numbers with up to three decimal places								
	I can solve problems involving number up to three decimal places								
	I can 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								
	I can solve problems which require knowing percentage and decimal equivalents of ½ ¼ ¾ 1/5 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.								

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Measurement	I can convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)								
	I understand and can use approximate equivalences between metric units and common imperial units such as inches, pounds and pints								
	I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres								
	I can calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes								
	I can estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]								
	I can solve problems involving converting between units of time								
	I can use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling								

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Geometry - Properties of Shape	I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations								
	I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles								
	I can draw given angles, and measure them in degrees (o)								
	I can identify: • angles at a point and one whole turn (total 360o) • angles at a point on a straight line and 1/2 a turn (total 180o) • other multiples of 90o								
	I can use the properties of rectangles to deduce related facts and find missing lengths and angles								
	I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles								
Geometry - Position and Direction	I can 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	I can solve comparison, sum and difference problems using information presented in a line graph								
	I can complete, read and interpret information in tables, including timetables								

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Greater Depth									
Number and Place Value	I can read, write, order and compare numbers to at least 10 000 000 and determine the value of each digit								
	I can count forwards or backwards in steps of powers of 10 for any given number up to 10 000 000								
	I can use negative numbers in context to solve problems, including through 0								
	I can round any whole number as requested								
	I can solve increasingly complex number problems and practical problems that involve all of the above								
	I can solve problems involving Roman numerals in context								
Addition and Subtraction	I can add and subtract whole numbers with more than 5 digits, choosing the most efficient method								
	I can add and subtract numbers mentally with increasingly large numbers, choosing the most efficient method								
	I can use rounding to check answers to calculations and determine, in the context of a problem, appropriate accuracy								
	I can solve increasingly complex addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why								

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Multiplication and Division	I can identify common factors and common multiples								
	I can confidently identify prime numbers								
	I can establish whether a number beyond 100 is prime and recall prime numbers up to 50								
	I can choose the most efficient method when multiplying and dividing								
	I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 confidently								
	I can confidently solve a range of problems involving multiplication and division including using my knowledge of factors and multiples, squares and cubes								
	I can solve multi-step problems involving addition, subtraction, multiplication and division and a combination of these								
	I can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple ratio								

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Fractions (including decimals and percentages)	I can compare and order fractions								
	I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths, cancelling fractions to their simplest form								
	I can add and subtract fractions with denominators that are multiples of the same number								
	I can multiply pairs of proper fractions, writing the answer in its simplest form								
	I can read and write decimal numbers as fractions up to thousandths								
	I can round decimals with three decimal places to the nearest whole number and to one, two and three decimal places								
	I can read, write, order and compare numbers with any number of decimal places								
	I can solve problems involving number up to three decimal places, rounding the answer appropriately								
	I can solve problems which require knowing percentage and decimal equivalents of a variety of fractions								

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Measurement	I can convert between different units of measure up to three decimal places								
	I understand that shapes with the same area can have different perimeters and vice versa								
	I can calculate and estimate the area of irregular shapes and triangles								
	I can calculate, estimate and compare volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]								
	I can solve problems involving converting between units of time, including interpreting complex timetables								
	I can use all four operations to solve more complex problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling								

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Geometry - Properties of Shape	I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations including constructing the nets of cubes and cuboids								
	I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles accurately								
	I can draw and measure angles accurately and use them to construct triangles								
	I can identify: • angles at a point and one whole turn (total 360o) • angles at a point on a straight line and 1/2 a turn (total 180o) • other multiples of 90o and 45o								
	I can use the properties of triangles and quadrilaterals to deduce related facts and find missing lengths and angles								
	I can distinguish between a wide variety of regular and irregular polygons based on reasoning about equal sides and angles								
Geometry - Position and	I can identify, precisely 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	I can solve comparison, sum and difference problems using information presented in a line graph, explaining my reasoning								
	I can complete, read and interpret information in tables, including timetables, recording my work systematically and explaining my reasoning								