MPPS Y5 Maths Progression Statements

Working towards the expected standard in Y5	Working at the expected standard in Y5	Working at greater depth in Y5
Number and Place Value		
Recognise the place value of each digit in any 4 to 6-digit numbers, using the terms thousands, hundreds, tens and ones.	Recognise the place value of each digit in any 7-digit number, using the terms millions, thousands, hundreds, tens and ones	Recognise place value of 7-digit numbers within a problem-solving context.
Count in multiples of 10s up to 1million, forwards and backwards, starting from 0.	Count in multiples of 10s up to 1million, forwards and backwards, to include negative numbers.	Count in multiples of 10s up to 1million, forwards and backwards, to include negative numbers. Being able to reduce numbers using the appropriate multiples
Order and compare numbers to at least 1 million.	Order and compare numbers to at least 1 million.	Order and compare numbers beyond 1 million
Round any number to the nearest 10, 100, 1000 or 10,000.	Round any number to the nearest multiple of 10 up to 100,000.	Round any number to the nearest multiple of 10, up to 100,000, being able to identify the largest or smallest number that could be rounded to a given number
Interpret negative numbers within a simple context (e.g. which is colder -5°C or -10°C?).	Interpret negative numbers within a context (e.g. which is colder -1°C or -11°C?) and count forwards and backwards with positive and negative whole numbers, including through 0.	Interpret negative numbers within a problem (e.g. which planet has the biggest change in temperature?)
	Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.	
	Solve number problems and practical problems that involve all of the above.	
Addition and Subtraction		
Add and subtract, with numbers up to 4 digits, using formal methods	Add and subtract, with numbers beyond 4 digits, using formal methods (columnar addition and subtraction)	Add and subtract, with numbers beyond 4 digits, using formal methods. Including calculating missing numbers.
	Add and subtract numbers mentally with increasingly large numbers	
Use simple methods such as rounding to check calculations	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Use methods such as rounding and inverses to check calculations, explaining which method is the most appropriate for each calculation.
Add and subtract decimals up to 2 d.p.	Add and subtract decimals up to 2 d.p. Including those with a different number of decimal places.	Add and subtract decimals up to 2 d.p. Including those with a different number of decimal places. Applying this within a context such as measure
	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	
Multiplication and Division		
Multiply and divide numbers mentally, using the known times table facts up to 12x12	Multiply and divide numbers mentally, using the known times table facts up to 12x12.	Multiply and divide numbers mentally, using the known times table facts up to 12x12. Extending this to numbers beyond 144
Multiply and divide numbers up to 4 digits by 1digits, including remainders, using formal methods	Multiply numbers up to 4 digits by 1-2 digits and divide numbers up to 4 digits by 1 digit including remainders, using formal methods and interpret remainders appropriately for context.	Multiply and divide numbers up to 4 digits by 1-2digits using formal methods, including remainders and decimals/fractions with remainders (e.g. 13÷2 =6r1 and 6. and 6.5)
Identify multiples and factors of numbers up to 25	Identify multiples and factors of numbers up to 50, including finding all factor pairs of a number, and common factors of 2 numbers.	Identify multiples and factors of numbers up to 50, including common factors of 2 numbers. Applying this knowledge to begin looking at prime numbers
Multiply and divide whole numbers by 10, 100 and 1000	Multiply and divide whole numbers by 10, 100 and 1000. Including decimals.	
Recall the first 5 square and cube numbers, using the correct notation	Recall the first 10 square and cube numbers, using the correct notation	Recall and sort the first 10 square and cube numbers, using the correct notation (e.g. Venn diagram)
Establish whether a number up to 50 is a prime and recall primes up to 19	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Establish whether a number up to 100 is a prime and recall primes up to 19.	Establish whether a number beyond 100 is a prime.

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Solve simple multi-step problems using all of the above. To include multiplication, division, fractions and factors	Solve multi-step problems using all of the above. To include multiplication, division, factors, squares and cubes and problems involving simple rates	Solve and create multi-step complex problems using all of the above. To include multiplication, division, factors, square numbers and scaling.
	Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	
Fractions and Decimals		
Compare and order fractions with denominators that are all multiples of the same number	Compare and order fractions with denominators that are all multiples of the same number, including improper and mixed numbers.	Compare and order fractions with denominators that are all multiples of the same number, including improper and mixed numbers. Adding in further possible fractions within a given sequence
	Identify, name and 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.	
Add and subtract fractions with the same denominator or denominators that are multiples of the same number	Add and subtract fractions with the same denominator or denominators that are multiples of the same number, including mixed and improper fractions.)	Add and subtract fractions with the same denominator or denominators that are multiples of the same number, including mixed and improper fractions. Using pictorial representations and calculating the equivalents when using mixed and improper fractions (e.g. 5 x 2 3/8 = 10 + 15/8 = 11 7/8).
Multiply fractions and mixed numbers by whole numbers, using supporting materials and diagrams	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Multiply fractions, improper fractions and mixed numbers by whole numbers
Read, write, order, compare and round decimal numbers up to 2 d.p.	Read, write, order, compare and round decimal numbers up to 3 d.p. Identifying the smallest and largest value from the numbers, and solve problems involving numbers up to 3 d.p.	Read, write, order, compare and round decimal numbers up to 3 d.p. Identifying the smallest and largest value from the numbers and finding numbers halfway between decimals (e.g. the number exactly between 2.604 and 2.86).
Read and write decimal numbers, up to 2 d.p. as fractions, applying tenth and hundredth place value knowledge. With appropriate support	Read and write decimal numbers, up to 2 d.p. as fractions, applying hundredth and thousandth place value knowledge	Read and write decimal numbers, up to 3 d.p. as fractions, beginning to apply to 4 d.p.
Recognise that a percentage is a number of parts out of 100, writing simple percentages as a fraction (e.g. 25% = 25/100).	Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction.	Recognise that a percentage is a number of parts out of 100 and identify its possible equivalents within fractions and decimals. Applying this within a numerical problem
Recall the percentage and decimal equivalents of ½, ¼, 1/5, 1/10 and 1/25	Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5, 1/10 and 1/25	Recall the percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5, and fractions with a denominator of a multiple of 10 or 25
Measurement		
Continue to read, write and convert times in both analogue and digital format, within a problem-solving situation, with support.	Continue to read, write and convert times in both analogue and digital format, within a problem-solving situation	
Estimate the conversion between different units of measurement (e.g. 36cm = 0.3m)	Convert between different units of metric measurement	
Approximate equivalences between metric and common imperial units, with support	Approximate equivalences between metric and common imperial units such as inches, pounds and pints	
Calculate the perimeter of composite recti-linear shapes	Calculate and measure the perimeter of composite recti-linear shapes.	Calculate and measure the perimeter of complex composite recti-linear shapes
Calculate, compare and measure the area of rectangles	Calculate and 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	Calculate, compare and measure the area of composite recti-linear shapes and irregular quadrilaterals.
Estimate, with reasoning based on area knowledge, the capacity and volume of 3-D shapes using cubes.	Estimate volume and capacity	

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Solve simple problems involving measurement and money, to use all four operations	Use all four operations to solve problems involving measure using decimal notation including scaling	
Properties of Shape		
Draw given angles and measure them accurately (nearest 5°) in degrees.	Draw given angles and measure them accurately (nearest 5°) in degrees.	Draw given angles and measure them accurately (nearest 5°) in degrees. Applying this to draw shapes accurately (sides to the nearest mm)
Identify, classify and construct a range of 3-D shapes	Identify, classify and construct a range of 3-D shapes, including identifying all the 2-D shapes that form the surface of the shape.	
	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	Distinguish and sort regular and irregular polygons based on reasoning about equal sides and angles	Distinguish and sort regular and irregular polygons based on reasoning about equal sides and angles. Using an appropriate data handling technique to demonstrate findings (e.g. Venn and Carroll diagrams)
	Identify angles at a point and 1 whole turn (total 360^{o}), angles at a point on a straight line and half a turn (total 180^{o}), other multiples of 90^{o}	
	Use the properties of rectangles to deduce related facts and find missing lengths and angles	
	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	
Position, Direction and Movement		
Describe movements between positions as translations of a given unit to the left/right and up/down.	Identify, describe and represent the position of a shape after a translation or reflection, using the appropriate language. Recognising that the shape has not changes after its transformation	Identify, describe and record the position of a shape after a translation or reflection. Using the appropriate mathematical language to describe. Marking the appropriate angles and parallel lines
Statistics		
	Solve comparison, sum and difference problems using information presented in a line graph	
Interpret and complete a range of tables, including simple timetables.	Complete, read and interpret information in tables, including timetables.	Interpret and complete a range of tables, including timetables. Making deductions from the timetables using their time interval knowledge