Mathematics Programme of Study – Year 6

Number and Place Value	1a. I can read, write, order and compare numbers to at least 10,000,000.	
	1b. I can determine the value of each digit in a number up to 10,000,000.	
	2. I can round any whole number to a given degree of accuracy.	
	3a. I can use negative numbers in context.	
	3b. I can calculate intervals across '0' when using negative numbers.	
	4. I can solve number problems and practical problems.	
	5. I can multiply up to 4 digits by a 2-digit whole number using the formal written method of long multiplication.	
	6a. I can divide up to 4 digits by a 2-digit whole number using the formal written method of long division.	
	6b. I can interpret remainders as whole number remainders, fractions or by rounding.	
Addition, Subtraction, Multiplication and Division	7. I can divide up to 4 digits by a 2-digit whole number using the formal written method of short division.	
	8. I can calculate mentally, including with mixed operations and large numbers.	
	9. I can identify common factors, common multiples and prime numbers.	
	10. I can use knowledge of the order of operations to carry out calculations involving the four operations.	
	11. I can solve addition and subtraction multi-step problems in different contexts.	
	12. I can solve problems using any operation +, x, -, ÷.	
	13. I can use estimation to check answers to calculations and determine an appropriate degree of accuracy.	
Fractions, Decimals and Percentages	14, I can simplify fractions and use common multiples to express fractions in the same denomination.	
	15. I can compare and order fractions, including fractions >1.	
	16. I can add and subtract fractions with different denominators and mixed numbers, using the idea of equivalent fractions.	
	17. I can multiply simple pairs of proper fractions, writing the answer in the simplest form.	
	18. I can divide proper fractions by whole numbers.	
	19. I can associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.	
	20a I can identify the value of each digit in numbers given to three decimal places.	
	20b. I can x and ÷.numbers by 10, 100 and 1000 where the answers are up to 3 decimal places.	
	21. I can x1-digit numbers with up to 2 decimal places by whole numbers.	
	22. I can use written division methods in cases where the answer has up to 2 decimal places.	
	23. I can solve problems which require answers to be rounded to specified degrees of accuracy.	
	24. I can recall, use and calculate equivalences between simple fractions, decimals and percentages.	
	25. I can solve problems involving the calculation and conversion of units of measure, using decimal notation to 3 decimal places where appropriate.	
	26. I use, read, write and convert between standard units of measure of length, mass, volume and time.	

Measurement	27. I can convert between miles and kilometres.	
	28. I can recognise that shapes with the same areas can have different perimeters and vice versa.	
	I can calculate the area of parallelograms and triangles.	
	29. I recognise when it is necessary to use the formulae for area and volume of shapes.	
	30. I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cm^3 and m^3, and extending to mm^3 and km^3.	
Geometry	31. I can draw 2-D shapes using given dimensions and angles.	
	32. I can recognise, describe and build simple 3-D shapes, including making nets.	
	33a. I can compare and classify geometric shapes based on their properties and sizes.	
	33b. I can find unknown angles in any triangles, quadrilaterals and regular polygons.	
	34a. I can illustrate and name parts of circles, including radius, diameter and circumference.	
	34b. I know that the diameter of a circle is twice the radius.	
	35. I can find unknown angles where they meet at a point, are on a straight line and are vertically opposite.	
	36. I can describe positions on the full co-ordinate grid (all four quadrants).	
	37. I can draw and translate simple shapes and reflect them in the axes.	
Ratio And Proportion	38. I can solve ratio and proportion problems involving the relative sizes of two quantities, where missing values can be found using multiplication and division facts.	
	39a. I can solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360.	
	39b. I can use percentages for comparison.	
	40. I can solve problems involving similar shapes where the scale factor is known or can be found.	
	41. I can solve ratio and proportion problems involving unequal sharing and grouping using knowledge of fractions and multiples.	
Algebra	42. I can use simple formulae.	
	43. I can generate and describe linear number sequences.	
	44. I can express missing number problems algebraically.	
	45. I can find pairs of numbers that satisfy number sentences involving two unknowns.	
	46. I can enumerate possibilities of combinations of two variables.	
Statistics	I can interpret pie charts.	
	I can construct pie charts.	
	I can interpret line graphs.	
	I can construct line graphs.	
	I can calculate and interpret the mean as an average.	
	I can interpret pie charts and line graphs to solve problems	