

Year 6 Objective Map - New Curriculum - effective from Sept 2015

Numbers and Place Value	Multiplication, Division, Addition and Subtraction.
read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
round any whole number to a required degree of accuracy	divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
use negative numbers in context, and calculate intervals across zero	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 the context
solve number and practical problems that involve all of the above.	perform mental calculations, including with mixed operations and large numbers
Fractions and Decimals and Percentages	identify common factors, common multiples and prime numbers
use common factors to simplify fractions; use common multiples to express fractions in the same denomination	use their knowledge of the order of operations to carry out calculations involving the four operations
compare and order fractions, including fractions > 1	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	solve problems involving addition, subtraction, multiplication and division
multiply simple pairs of proper fractions, writing the answer in its simplest form	use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
divide proper fractions by whole numbers	Geometry
associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction	draw 2-D shapes using given dimensions and angles
identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	recognise, describe and build simple 3-D shapes, including making nets
Ratio and proportion	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
solve problems involving similar shapes where the scale factor is known or can be found	describe positions on the full coordinate grid (all four quadrants)
solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Algebra	Measurement
use simple formulae	* tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks * cycle 2
generate and describe linear number sequences	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
express missing number problems algebraically	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
find pairs of numbers that satisfy an equation with two unknowns	convert between miles and kilometres
enumerate possibilities of combinations of two variables.	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 (cm ³) and cubic metres (m ³), and extending to other units [for example, mm ³ and km ³].
	Statistics
	interpret and construct pie charts and line graphs and use these to solve problems
	calculate and interpret the mean as an average.