

Normanby Primary School – Year 6 Programme of Study

Ma6/2.1 Number & Place Value

Ma6/2.1a read, write, order and compare numbers up to 10 000 000 and determine the value of each digit

Ma6/2.1b round any whole number to a required degree of accuracy

Ma6/2.1c use negative numbers in context, and calculate intervals across 0

Ma6/2.1d solve number and practical problems that involve all of the above.

Ma6/2.2 Addition, Subtraction, Multiplication & Division

Ma6/2.2a multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication

Ma6/2.2b 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

Ma6/2.2c 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

Ma6/2.2d perform mental calculations, including with mixed operations and large numbers.

Ma6/2.2e identify common factors, common multiples and prime numbers

Ma6/2.2f use their knowledge of the order of operations to carry out calculations involving the 4 operations

Ma6/2.2g solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

Ma6/2.2h solve problems involving addition, subtraction, multiplication and division

Ma6/2.2i use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Ma6/2.3 Fractions (decimals & percentages)

Ma6/2.3a use common factors to simplify fractions; use common multiples to express fractions in the same denomination

Ma6/2.3b compare and order fractions, including fractions >1

Ma6/2.3c add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

Ma6/2.3d multiply simple pairs of proper fractions, writing the answer in its simplest form

Ma6/2.3e divide proper fractions by whole numbers

Ma6/2.3f associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.

Ma6/2.3g identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to three decimal places

Ma6/2.3h multiply one-digit numbers with up to 2 decimal places by whole numbers

Ma6/2.3i use written division methods in cases where the answer has up to 2 decimal places

Ma6/2.3j solve problems which require answers to be rounded to specified degrees of accuracy

Ma6/2.3k recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Ma6/2.4 Ratio & Proportion

Ma6/2.4a solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts

Ma6/2.4b solve problems involving the calculation of percentages and the use of percentages for comparison

Ma6/2.4c solve problems involving similar shapes where the scale factor is known or can be found

Ma6/2.4d solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Ma6/2.5 Algebra

Ma6/2.5a use simple formulae

Ma6/2.5b generate and describe linear number sequences

Ma6/2.5c express missing number problems algebraically

Ma6/2.5d find pairs of numbers that satisfy an equation with two unknowns

Ma6/2.5e enumerate possibilities of combinations of 2 variables.

Ma6/3.1 Measurement

Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate

Ma6/3.1b	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 3 decimal places
Ma6/3.1c	convert between miles and kilometres
Ma6/3.1d	recognise that shapes with the same areas can have different perimeters and vice versa
Ma6/3.1e	recognise when it is possible to use formulae for area and volume of shapes
Ma6/3.1f	calculate the area of parallelograms and triangles
Ma6/3.1g	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
Ma6/3.2 Properties of Shape	
Ma6/3.2a	draw 2-D shapes using given dimensions and angles
Ma6/3.2b	recognise, describe and build simple 3-D shapes, including making nets
Ma6/3.2c	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
Ma6/3.2d	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
Ma6/3.2e	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
Ma6/3.3 Position & Direction	
Ma6/3.3a	describe positions on the full coordinate grid (all 4 quadrants)
Ma6/3.3b	draw and translate simple shapes on the coordinate plane and reflect them in the axes.
Ma6/4.1 Statistics	
Ma6/4.1a	interpret and construct pie charts and line graphs and use these to solve problems
Ma6/4.1b	calculate and interpret the mean as an average.