

Year 6 Curriculum Expectations - Maths

Number

Numbers and Place Value

I can read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.

I can round any whole number to a required degree of accuracy.

I can use negative numbers in context, and calculate intervals across zero.

I can solve number and practical problems that involve all of the above.

Addition and Subtraction/Multiplication and Division

I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

I can 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.

I can divide numbers up to 4 digits by a two-digit whole number using the formal written method of short division where appropriate, interpreting remainders according to the context.

I can perform mental calculations, including with mixed operations and large numbers.

I can identify common factors, common multiples and prime numbers.

I can use knowledge of the order of operations to carry out calculations involving the four operations.

I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

I can solve problems involving addition, subtraction, multiplication and division.

I can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

Number (continued)

Ratio and Proportion

I can solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

I can solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison.

I can solve problems involving similar shapes where the scale factor is known or can be found.

I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Algebra

I can use simple formulae.

I can generate and describe linear number sequences.

I can express missing number problems algebraically.

I can find pairs of numbers that satisfy number sentences involving two unknowns.

I can find possibilities of combinations of two variables.

Fractions, Decimals and Percentages

I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination.

I can compare & order including fractions >1 .

I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.

I can multiply simple pairs of proper fractions, writing the answer in its simplest form [for example $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$].

I can divide proper fractions by whole numbers [for example $\frac{1}{3} \div 2 = \frac{1}{6}$].

I can associate a fraction with division and calculate decimal fraction equivalents [for example 0.375] for a simple fraction [for example $\frac{3}{8}$].

I can identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers to 3 decimal places.

I can multiply one-digit numbers with up to two decimal places by whole numbers.

I can use written division methods where the answer has up to two decimal places.

I can solve problems which require answers to be rounded to specified degrees of accuracy.

I can recall & use equivalences between simple fractions, decimals & percentages, including in different contexts.

Measurement

I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.

I can 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.

I can convert between miles and kilometres.

I can recognise that shapes with the same areas can have different perimeters and vice versa.

I can recognise when it is possible to use formulae for area and volume of shapes.

I can calculate the area of parallelograms and triangles.

I can calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units [for example mm^3 and km^3].

Geometry

Properties of Shape

I can draw 2-D shapes using given dimensions and angles.

I can recognise, describe and build simple 3-D shapes, including making nets.

I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.

I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.

I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Position and Direction

I can describe positions on the full coordinate grid (all four quadrants).

I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

Statistics

I can interpret and construct pie charts and line graphs and use these to solve problems.

I can calculate and interpret the mean as an average.