

Year 6 Maths Learning Objectives

Number and place value

- L.O: 1 Read and write numbers up to 10 million.
- L.O: 2 Order whole numbers to 10 million.
- L.O: 3 Order decimal numbers up to 3 decimal places.
- L.O: 4 Compare whole numbers up to 10 million.
- L.O: 5 Understand place value of whole numbers up to 10 million.
- L.O: 6 Round decimal numbers to a given place value.
- L.O: 7 Rounds any whole number to a required degree of accuracy.
- L.O: 8 Uses negative numbers in context, and calculates intervals across zero.
- L.O: 9 Solves number and practical problems that involve all of the above.

Number - addition and subtraction

- L.O: 10 Can use formal methods to solve multi-step problems.
- L.O: 11 Can calculate mentally, using efficient strategies such as manipulating expressions using commutative and distributive properties to simplify the calculation.

Number - multiplication and division

- L.O: 12 Multiplies multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.
- L.O: 13 Divides numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interprets remainders as whole number remainders if appropriate for the context.
- L.O: 14 Divides numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interprets remainders as fractions if appropriate for the context.
- L.O: 15 Divides numbers up to 4 digits by a two-digit whole number using the formal written method of long division and rounds if appropriate for the context.
- L.O: 16 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.
- L.O: 17 Identifies common factors.
- L.O: 18 Identifies common multiples.
- L.O: 19 Identifies prime numbers.
- L.O: 20 Uses their knowledge of the order of operations to carry out calculations involving the four operations.
- L.O: 21 Solves problems involving addition, subtraction, multiplication and division.
- L.O: 22 Uses estimation to check answers to calculations and determine s, in the context of a problem, an appropriate degree of accuracy.

Number - Fractions (Decimals & Percentages)

- L.O: 23 Uses common factors to simplify fractions.
- L.O: 24 Uses common multiples to express fractions in the same denomination.
- L.O: 25 Compares and orders fractions, including fractions > 1 .
- L.O: 26 Adds fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
- L.O: 27 Subtracts fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
- L.O: 28 Multiplies simple pairs of proper fractions, writing the answer in its simplest form.
- L.O: 29 Divides proper fractions by whole numbers.
- L.O: 30 Can recognise the relationship between fractions, decimals and percentages and can express them as equivalent quantities.
- L.O: 31 Identifies the value of each digit in numbers given to three decimal places.
- L.O: 32 Multiplies and divides numbers by 10, 100 and 1000 giving answers up to three decimal places.
- L.O: 33 Multiplies one-digit numbers with up to two decimal places by whole numbers.
- L.O: 34 Solves problems which require answers to be rounded to specified degrees of accuracy.
- L.O: 35 Can calculate using fractions
- L.O: 36 Can calculate using decimals
- L.O: 37 Can calculate using percentages.

Ratio & Proportion

- L.O: 38 Solves problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.
- L.O: 39 Solves problems involving similar shapes where the scale factor is known or can be found.
- L.O: 40 Solves problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Algebra

- L.O: 41 Can substitute values into a simple formula to solve problems.
- L.O: 42 Generates and describes linear number sequences.
- L.O: 43 Expresses missing number problems algebraically.
- L.O: 44 Finds pairs of numbers that satisfy an equation with two unknowns.
- L.O: 45 Enumerates possibilities of combinations of two variables.

Measurement

- L.O: 46 Solves problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
- L.O: 47 Uses, reads, writes and converts between standard units, converting measurements of length from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.
- L.O: 48 Uses, reads, writes and converts between standard units, converting measurements of mass from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.
- L.O: 49 Uses, reads, writes and converts between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.
- L.O: 50 Uses, reads, writes and converts between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.
- L.O: 51 Converts between miles and kilometres.
- L.O: 52 Recognises that shapes with the same areas can have different perimeters and vice versa.
- L.O: 53 Recognises when it is possible to use formulae for area and volume of shapes.
- L.O: 54 Calculates the area of parallelograms.
- L.O: 55 Calculates the area of triangles.
- L.O: 56 Calculates, estimates and compares volume of cubes and cuboids using standard units, including cubic centimetres (c m 3) and cubic metres (m3), and extending to other units.

Geometry-Properties of shapes

- L.O: 57 Draws 2-D shapes using given dimensions and angles.
- L.O: 58 Recognises, describes and builds simple 3-D shapes, including making nets.
- L.O: 59 Compares and classifies geometric shapes based on their properties and sizes.
- L.O: 60 Finds unknown angles in any triangles.
- L.O: 61 Finds unknown angles in any quadrilaterals.
- L.O: 62 Finds unknown angles in any regular polygons.
- L.O: 63 Illustrates and names parts of circles, including radius, diameter and circumference and knows that the diameter is twice the radius.
- L.O: 64 Use mathematical reasoning to find missing angles.
- L.O: 65 Recognise angles where they meet at a point, are on a straight line, or are vertically opposite.

Geometry-Position & direction

- L.O: 66 Describes positions on the full coordinate grid (all four quadrants).
- L.O: 67 Draws and translates simple shapes on the coordinate plane.
- L.O: 68 Reflects simple shapes in the axes.

Statistics

- L.O: 69 Interprets and constructs pie charts and uses these to solve problems.
- L.O: 70 Interprets and constructs line graphs and uses these to solve problems.
- L.O: 71 Calculates and interprets the mean as an average.