



**Year 6 Maths Curriculum Map**

**Autumn 1**

**Week 1: Place Value and Rounding Off**

- Can read and write numbers up to 10 000 000 and determine the value of each digit.
- Can order and compare numbers up to 10 000 000 and determine the value of each digit.
- Can round any whole number to a required degree of accuracy.
- Can solve number and practical problems that involve all of the above.

**Week 2: Mental and Written Addition and Subtraction of Large Numbers**

- Can perform mental calculations, including with mixed operations and large numbers.
- Can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

**Week 3: Multiples, Factors and Prime Numbers**

- Can perform mental calculations, including with mixed operations and large numbers.
- Can identify common factors, common multiples and prime numbers.
- Can solve problems involving addition, subtraction, multiplication and division.

**Week 4: Written Methods for Multiplication and Division**

- Can multiply multi-digit numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long multiplication.
- Can divide numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long division.
- Can interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context, when using the formal method of long division.
- Can solve problems involving addition, subtraction, multiplication and division.
- Can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

**Week 5: Circles and Angles**

- Can illustrate and name parts of circles, including radius, diameter and circumference, and know that the diameter is twice the radius.
- Can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.



### **Week 6: Units of Measure**

- Can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
- 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.
- Can convert between miles and kilometres.

## **Autumn 2**

### **Week 1: Written Methods for Multiplication and Division**

- Can multiply multi-digit numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long multiplication.
- Can divide numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long division.
- Can interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context, when using the formal method of long division.

### **Week 2: Comparing, Ordering and Simplifying Fractions**

- Can compare and order fractions, including fractions  $>1$ .
- Can use common factors to simplify fractions and use common multiples to express fractions in the same denomination.

### **Week 3: Multiplying Decimals by 10, 100 and 1000**

- Can identify the value of each digit to three decimal places, and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places.
- Can solve problems which require answers to be rounded to specified degrees of accuracy.

### **Week 4: Order of Operations**

- Can perform mental calculations, including with mixed operations and large numbers.
- Can use their knowledge of the order of operations to carry out calculations involving the four operations.
- Can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Can solve problems involving addition, subtraction, multiplication and division.
- Can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.



**Week 5: 2D and 3D Shapes**

- Can draw 2-D shapes using given dimensions and angles.
- Can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.
- Can recognise, describe and build simple 3-D shapes, including making nets.

**Week 6: Pie Charts**

- Can interpret and construct pie charts and line graphs, and use these to solve problems.

**Spring 1**

**Week 1: Negative Numbers and Solving Problems involving Numbers**

- Can read and write numbers up to 10 000 000 and determine the value of each digit.
- Can order and compare numbers up to 10 000 000 and determine the value of each digit.
- Can round any whole number to a required degree of accuracy.
- Can use negative numbers in context, and calculate intervals across zero.
- Can solve number and practical problems that involve all of the above.

**Week 2: Mental and Written Addition and Subtraction of Decimals and Money**

- Can perform mental calculations, including with mixed operations and large numbers.
- Can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

**Week 3: Mental and Written Multiplication and Division**

- Can perform mental calculations, including with mixed operations and large numbers.
- Can identify common factors, common multiples and prime numbers.
- Can use their knowledge of the order of operations to carry out calculations involving the four operations.
- Can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.



### **Week 4: Calculating with Fractions**

- Can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
- Can associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g.  $\frac{3}{8}$ ).
- Can multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g.  $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ).
- Can divide proper fractions by whole numbers (e.g.  $\frac{1}{3} \div 2 = \frac{1}{6}$ ).

### **Week 5: Reflections and Translations on Coordinates Axes**

- Can describe positions on the full coordinate grid (all four quadrants).
- Can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

### **Week 6: Perimeter, Area and Volume**

- Can recognise that shapes with the same area can have different perimeters and vice versa.
- Can recognise when it is possible to use formulae for area and volume of shapes.
- Can calculate the area of parallelograms and triangles.
- Can calculate, estimate and compare the volume of cubes and cuboids using standard units, including centimetre cubed ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ), and extending to other units such as  $\text{mm}^3$  and  $\text{km}^3$ .

## **Spring 2**

### **Week 1: Calculating with Large Numbers**

- Can multiply multi-digit numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long multiplication.
- Can divide numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long division.
- Can interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context, when using the formal method of long division.
- Can perform mental calculations, including with mixed operations and large numbers.
- Can use their knowledge of the order of operations to carry out calculations involving the four operations.
- Can solve problems involving addition, subtraction, multiplication and division.



**Week 2: Multiplying and Dividing Decimals**

- Can multiply 1-digit numbers (with up to two decimal places) by whole numbers.
- Can use written division methods in cases where the answer has up to two decimal places.
- Can solve problems which require answers to be rounded to specified degrees of accuracy.

**Week 3: Percentages, Decimals and Fractions**

- Can solve problems involving the calculation of percentages (for example, of measures, and such as find 15% of 360) and the use of percentages for comparison.
- Can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

**Week 4: Simple Formulae**

- Can use simple formulae expressed in words..
- Can express missing number problems algebraically.
- Can find pairs of numbers that satisfy an equation with two unknowns.
- Can enumerate possibilities of combinations of two variables.

**Week 5: Area and Volume**

- Can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
- 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.
- Can recognise when it is possible to use formulae for area and volume of shapes.
- Can calculate the area of parallelograms and triangles.

**Week 6: Line Graphs**

- Can interpret and construct pie charts and line graphs, and use these to solve problems.

**Summer 1**

**Week 1: Problems involving Number**

- Can read and write numbers up to 10 000 000 and determine the value of each digit.
- Can order and compare numbers up to 10 000 000 and determine the value of each digit.
- Can round any whole number to a required degree of accuracy.



- Can use negative numbers in context, and calculate intervals across zero.
- Can solve number and practical problems that involve all of the above.

### **Week 2: Adding and Subtracting Large and Small Numbers**

- Can perform mental calculations, including with mixed operations and large numbers.
- Can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

### **Week 3: Long Multiplication and Division**

- Can multiply multi-digit numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long multiplication.
- Can divide numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long division.
- Can interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context, when using the formal method of long division.
- Can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

### **Week 4: Working with Fractions**

- Can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
- Can multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g.  $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ).
- Can divide proper fractions by whole numbers (e.g.  $\frac{1}{3} \div 2 = \frac{1}{6}$ ).

### **Week 5: Problems involving Percentages, Fractions and Decimals**

- Can solve problems involving the calculation of percentages (for example, of measures, and such as find 15% of 360) and the use of percentages for comparison.
- Can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

### **Week 6: Ratio and Proportion**

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



- Can solve problems involving similar shapes where the scale factor is known or can be found.
- Can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

### Summer 2

#### Week 1: Solving Problems involving Money

- Can multiply multi-digit numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long multiplication.
- Can divide numbers (up to 4-digits) by a 2-digit whole number using the formal written method of long division.
- Can interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context, when using the formal method of long division.
- Can perform mental calculations, including with mixed operations and large numbers.
- Can use their knowledge of the order of operations to carry out calculations involving the four operations.
- Can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Can solve problems involving addition, subtraction, multiplication and division.
- Can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

#### Week 2: Number Puzzles

- Can use simple formulae expressed in words.
- Can express missing number problems algebraically.
- Can generate and describe linear number sequences.
- Can find pairs of numbers that satisfy an equation with two unknowns.
- Can enumerate possibilities of combinations of two variables.

#### Week 3: Fractions with Different Denominators

- Can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
- Can multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g.  $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ).
- Can use common factors to simplify fractions and use common multiples to express fractions in the same denomination.



**Week 4: Problems involving Percentages and Decimals**

- Can solve problems involving the calculation of percentages (for example, of measures, and such as find 15% of 360) and the use of percentages for comparison.
- Can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

**Week 5: Problems involving Measures**

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

**Week 6: Using Data**

- Can interpret and construct pie charts and line graphs, and use these to solve problems.
- Can calculate and interpret the mean as an average.