

Number

- Read, write, order and compare numbers to at least 10 000 000. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.
- Determine the place value of each digit in numbers up to 10 000 000.
- Round any whole number to a required degree of accuracy.
- Use negative numbers in context and calculate intervals across zero.
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Identify common factors, common multiples and prime numbers.
- Perform mental operations, including those with mixed operations, with large numbers.
- Multiply multi-digit numbers with up to 4 digits by 2 digit numbers, using the formal method of long division.
- Divide numbers with up to 4 digits by 2 digit whole numbers, using the formal method of long division, interpreting the remainders as whole number remainders, fractions or by rounding up or down depending upon the context.
- Divide numbers with up to 4 digits by 2 digit whole numbers, using the formal method of short division, interpreting the remainders depending upon the context.
- Solve problems involving addition, subtraction, multiplication and division.
- Use their knowledge of the order of operations to carry out calculations involving the four operations.

Fractions, decimals and percentages

- Use common factors to simplify fractions and common multiples to express fractions with the same denomination.
- Compare and order fractions, including fractions greater than 1.
- Add and subtract fractions and mixed numbers with different denominators.

St Bartholomew's Primary School



Year 6

End of Year Expectations Maths

Geometry

- 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 of up to three decimal places.
- Convert between miles and kilometres.
- Recognise that shapes with the same areas can have different perimeters and vice versa.
- Calculate the area of parallelograms and triangles.
- Recognise when it is possible to use the formulae for the area of shapes.
- 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 [eg: mm^3 and km^3].
- Recognise when it is possible to use the formulae for the volume of shapes.
- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
- Compare and classify geometric shapes based on their properties and sizes.
- Describe simple 3-D shapes.
- Draw 2-D shapes using given dimensions and angles.
- Recognise and build simple 3D shapes, including making nets.
- Find unknown angles in any triangles, quadrilaterals and regular polygons.
- Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
- Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
- Draw and translate simple shapes on the co-ordinate plane, and reflect them in the axes.
- Describe positions on the full co-ordinate grid (all four quadrants).

Statistics

- Interpret and construct pie charts and line graphs and use these to solve problems.
- Calculate and interpret the mean as an average.

Fractions, decimals and percentages continued

- Multiply simple pairs of proper fractions, giving answers in their simplest form.
- Divide proper fractions by whole numbers eg $1/3 \div 2 = 1/6$.
- Associate a fraction with division to calculate decimal fraction equivalents (eg: 0.375) for a simple fraction [eg: $3/8$].
- Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.
- Multiply one-digit numbers with up to two decimal places by whole numbers.
- Use written division methods in cases where the answer has up to two-decimal places.
- Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Ratio and proportion

- Solve ratio and proportion problems by using multiplication and division.
- Solve problems involving the calculation of percentages [eg: of measures such as 15% of 360] and the use of percentages for comparison.
- Solve problem involving similar shapes where the scale factor is known or can be found.
- Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Algebra

- Express missing number problems algebraically.
- Use simple formulae.
- Generate and describe linear number sequences.
- Find pairs of numbers that satisfy an equation with two unknowns.