

Year 6 Mathematics (Number) Meeting Expectations

- Use negative numbers in context, and calculate intervals across zero
- Round any whole number to a required degree of accuracy and solve problems which require answers to be rounded to a specific degree of accuracy
- Solve problems involving the relative sizes of two quantities where the missing values can be found by using integer multiplication and division facts
- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- Solve problems involving the calculation of percentages, (for example, of measures) such as 20% of 440 and the use of percentages for comparison
- Multiply 1-digit numbers with up to two decimal places by whole numbers
- Perform mental calculations, including with mixed operations with large numbers
- Divide numbers up to 4-digits by a 2-digit whole number using formal written methods of long division and interpret remainder in various ways
- Use knowledge of order of operations to carry out calculations involving all four operations
- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- Multiply simple pairs of proper fractions, writing the answer in its simplest form
- Divide proper fractions by whole numbers e.g. $\frac{1}{8} \div 2 = \frac{1}{16}$
- Associate a fraction with division and calculate decimal fraction equivalents (for example, 0.375 for $\frac{3}{8}$)
- Express missing number problems algebraically
- Find pairs of numbers that satisfy number sentences involving two unknowns

Year 6 Mathematics (Measurement, Geometry and Statistics) Meeting Expectations

- Recognise, describe and build simple 3D shapes, including making nets
- Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangle, quadrilateral and regular polygons
- Illustrate and name parts of circles, including radius, diameter and circumference and know that the radius is half the diameter
- 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 up to 3 decimal places
- Calculate the area of a parallelogram and triangles and calculate, estimate and compare volume of cubes and cuboids using standard units
- Interpret and construct pie charts and line graphs and use these to solve problems

Year 6 Mathematics Securing Expectations

- Compare, order and convert between fractions, decimals and percentages in contexts related to science, history or geography learning
- Move beyond squared and cubed numbers to calculate problems such as $X \times 10^n$ where n is positive
- Use $=$, $\neq$, $<$, $>$, $\leq$, $\geq$ correctly
- Multiply all integers, (using efficient written methods) including mixed numbers and negative numbers
- Recognise an arithmetic progression and find the n th term
- Use formula for measuring area of shape, such as cuboid and triangle to work out area of irregular shape in the school environment
- Use four operations with mass, length, time, money and other measures, including with decimal quantities
- Create a scaled model of an historical or geographical structure showing an acceptable degree of accuracy

using known measurements

- Calculate costs and time involved to visit a destination in another part of the world relating to on-going learning in history or geography
- Collect own data on personal project and present information in formats of their choosing, charts, graphs and tables and answer specific questions related to their research