

## NEW MATHS CURRICULUM OBJECTIVES YEAR 6

### Number and Place Value

To read, write, order and compare numbers up to ten million, knowing the value of each digit

To round any whole number.

To calculate using negative numbers, calculating intervals across zero

To solve number problems.

### Calculations

To multiply a four digit number by a two-digit number, using the formal written method

To divide a four digit number by a two digit number, using the written formal method

To interpret any remainder as a whole number, fraction or by rounding as appropriate to the context

To perform mental calculations, including mixed operations and large numbers

To solve number problems and do calculations

To estimate to check the answer of a calculation and determine levels of accuracy

To know what order to do things in a calculation

To know how to find common multiples, common factors and prime numbers

To work out what calculations are needed to solve a problem - being confident across the 4 operations

### Fractions, Decimals and Percentages

To simplify fractions and to write equivalent fractions with the same denominator using common multiples

To compare and order fractions, including fractions greater than 1

To add and subtract fractions by using a common denominator

To multiply simple pairs of common fractions, giving answer in simplest form

To divide proper fractions by whole numbers

To multiply or divide numbers by 10, 100 or 1000

To multiply and divide decimal numbers by whole numbers

To round decimal numbers to a given number of decimal places

To convert fractions to decimals by dividing

To convert between fractions, decimals and percentages

### Ratio and Proportion

To solve problems that are to do with the relative sizes of two amounts, using integer multiplication and division facts

To enlarge a shape by a scale factor and find the scale factor of an enlarged shape

To find a percentage of an amount

To use percentages to compare amounts

To work out how to share things unequally

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### Algebra

To generate and describe number sequences

To solve missing number problems using symbols and letters

To find pairs of numbers to solve problems with two unknowns, and list all possible combinations.

To use formulas written in words

### Measurement

To solve problems involving the calculation and conversion of units of measure, using decimal notation of up to 3 d.p

To convert between units of measurements of length, mass and volume, using decimal notation up to 3 d.p.

To convert between different units of time, and between miles and kilometres

To calculate the area of a triangle

To calculate the area of a parallelogram

To know that different shapes with the same area can have different perimeters and vice versa.

To calculate, estimate and compare the volumes of cubes and cuboids ( $\text{mm}^3$ ,  $\text{cm}^3$ ,  $\text{m}^3$ ,  $\text{km}^3$ )

To recognise when it is possible to use formula

### Geometry

To draw 2D shapes accurately, using given dimensions and angles

To recognise, describe and build 3D shapes and make nets.

To draw nets of 3D shapes. To use nets to draw 3D shapes accurately

To know the properties of different shapes

To name and illustrate the parts of a circle (radius, diameter and circumference)

To know the diameter of a circle is twice the length of its radius

To use knowledge of shapes to find missing angles in any triangles, quadrilaterals and regular polygons

To recognise angles where they meet on a point, are on a straight line, or are vertically opposite and missing angles.

To use coordinates in four quadrants

To reflect a shape in the axes of a grid and give the coordinates of the image

To translate shapes using coordinates

### Statistics

To understand what a pie chart shows

To draw and interpret pie charts

## NEW MATHS CURRICULUM OBJECTIVES YEAR 6

To interpret and construct line graphs
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To know what the mean is and how to calculate and use it
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