



## Number & Place Value

**Read, write, order and compare numbers up to at least 1,000,000 and determine the value of each digit.**  
*I can read, write, order and compare numbers up to at least 1,000,000 (one million) and say the value of each digit.*

Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.  
*I can keep multiplying a number by 10 or 100 up to 1,000,000 and count back.*

**Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.**  
*I can use negative numbers in context when looking at temperature or money, counting forwards and backwards through 0.*

Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.  
*I can round numbers up to 1,000,000 to the nearest 10, 100, 1000, 10,000 or 100,000.*

Solve number problems and practical problems that involve ordering and comparing numbers up to 1,000,000, counting forwards or backwards in steps, interpreting negative numbers and rounding.  
*I can solve number and practical problems that involve ordering and comparing numbers up to 1,000,000, counting forwards or backwards in steps, negative numbers, and rounding.*

Read Roman numerals up to 1000 (M) and recognise years written in Roman numerals.  
*I can read Roman numerals up to 1000 and recognise years written in them.*

## Addition & Subtraction

**Add and subtract whole numbers with more than 4 digits, using formal written methods (columnar addition and subtraction).**  
*I can add and subtract numbers with more than 4 digits using written methods.*

**Add and subtract numbers mentally with increasingly large numbers.**  
*I can add and subtract 2 and 3 digit numbers in my head.*

Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.  
*I can use rounding to check answers to calculations and determine levels of accuracy.*

**Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.**  
*I can solve addition and subtraction problems needing more than one step and can work out which operation and method is the most suitable.*

## Multiplication & Division

**Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.**  
*I can find multiples and factors of a number and can identify factors common to 2 different numbers.*

Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.  
*I can use vocabulary relating to prime numbers, prime factors and composite numbers.*

Establish whether a number up to 100 is prime and recall prime numbers up to 19.  
*I can work out if any given number up to 100 is a prime number and can recall prime numbers up to 19.*

Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers.  
*I can multiply numbers with up to 4 digits by a 1 or 2 digit number using formal written methods.*

Multiply and divide numbers mentally, drawing upon known facts.  
*I can mentally multiply and divide numbers using the times tables.*

Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.  
*I can divide numbers with up to 4 digits by a 1 digit number, using formal written methods, and can show remainders.*

## Multiplication & Division continued

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.  
*I can multiply and divide whole and decimal numbers by 10, 100 and 1000.*

Recognise and use square numbers and cube numbers, and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>).  
*I can identify and use square and cube numbers and their notations.*

**Solve problems involving multiplication and division, including using his/her knowledge of factors and multiples, squares and cubes.**  
*I can solve problems involving multiplication and division, including using factors and multiples, squares and cubes.*

Solve problems involving addition, subtraction, multiplication and division, and a combination of these, including understanding the meaning of the equals sign.  
*I can solve problems involving addition, subtraction, multiplication and division, and a combination of these, including understanding the meaning of the equals sign.*

**Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.**  
*I can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.*

## Fractions

**Compare and order fractions whose denominators are all multiples of the same number.**  
*I can compare and order fractions whose denominators are all multiples of the same number.*

Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.  
*I can find, name and write equivalent fractions of a given fraction including tenths and hundredths.*

Recognise mixed numbers and improper fractions and convert from one form to the other, and write mathematical statements > 1 as a mixed number e.g.  $2/5 + 4/5 = 6/5 = 1$  and  $1/5$ .  
*I can identify mixed numbers and improper fractions and convert from one to another such as  $2/5 + 4/5 = 6/5 = 1$  and  $1/5$ .*

Add and subtract fractions with the same denominator and denominators that are multiples of the same number.  
*I can add and subtract fractions whose denominators are all multiples of the same number.*

Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.  
*I can multiply fractions by whole numbers using objects and pictures.*

**Read and write decimal numbers as fractions e.g.  $0.71 = 71/100$ .**  
*I can read and write decimal numbers as fractions such as  $0.71 = 71/100$ .*

Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.  
*I can identify and use thousandths and can explain how they relate to tenths and hundredths and their decimal equivalents.*

Round decimals with two decimal places to the nearest whole number and to one decimal place.  
*I can round numbers with two decimal places.*

**Read, write, order and compare numbers with up to three decimal places.**  
*I can read, write, order and compare numbers with up to three decimal places.*

Solve problems involving numbers with up to three decimal places.  
*I can solve problems involving numbers with up to three decimal places.*

Recognise the percent symbol (%), understand that percent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.  
*I can identify the percent symbol (%) and how it relates to parts per hundred, hundredths and decimals.*

**Solve problems which require knowing percentage and decimal equivalents of  $1/2$ ,  $1/4$ ,  $1/5$ ,  $2/5$ ,  $4/5$  and those fractions with a denominator of a multiple of 10 or 25.**  
*I can solve problems which require knowing percentage and decimal equivalents of  $1/2$ ,  $1/4$ ,  $1/5$ ,  $2/5$ ,  $4/5$  and those fractions with a denominator of a multiple of 10 or 25.*

## Measurement

**Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).**  
*I can convert between different forms of metric measurement e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre.*

Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.  
*I can understand and compare equivalences between metric units and common imperial units. These might include: inches, pounds or pints.*

**Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.**  
*I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.*

**Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres ( $cm^2$ ) and square metres ( $m^2$ ), and estimate the area of irregular shapes.**  
*I can calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres ( $cm^2$ ), square metres ( $m^2$ ), and estimate the area of irregular shapes.*

Estimate volume e.g. using  $1cm^3$  blocks to build cuboids (including cubes) and capacity e.g. using water.  
*I can estimate volume by using  $1cm^3$  blocks to build cuboids (including cubes) and capacity by using water and different containers.*

Solve problems involving converting between units of time.  
*I can solve problems where I need to convert between units of time.*

Use all four operations to solve problems involving measure e.g. length, mass, volume, money, using decimal notation, including scaling.  
*I can use all four operations to solve problems involving measure such as length, mass, volume, money, using decimal notation, including scaling.*

## Properties of Shape

Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.  
*I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations.*

Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.  
*I can estimate and compare acute, obtuse and reflex angles. I know that angles are measured in degrees.*

**Draw given angles and measure them in degrees ( $^\circ$ ).**  
*I can draw given angles and measure them in degrees.*

Identify angles at a point and one whole turn (total  $360^\circ$ ).  
*I can identify angles at a point and one whole turn.*

Identify angles at a point on a straight line and  $1/2$  a turn (total  $180^\circ$ ).  
*I can identify angles at a point on a straight line and  $1/2$  a turn (total  $180^\circ$ ).*

Identify other multiples of  $90^\circ$ .  
*I can identify other multiples of  $90^\circ$ .*

Use the properties of rectangles to deduce related facts and find missing lengths and angles.  
*I can use the properties of rectangles to find related facts, missing lengths and missing angles.*

**Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.**  
*I can tell the difference between regular and irregular polygons. I can do this using reasoning about equal sides and angles.*

## Position & Direction

Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.  
*I can identify, describe and represent the position of a shape following a reflection or translation. I can use mathematical vocabulary to explain this and I know that the shape has not changed.*

## Statistics

Solve comparison, sum and difference problems using information presented in a line graph.  
*I can solve comparison, sum and difference problems using information presented in a line graph.*

**Complete, read and interpret information in tables, including timetables.**  
*I can complete, read and interpret information in tables, including timetables.*