



Year 6 – Key Skills

COUNTING	Count on/back in steps of 0.1, 0.2, 0.25, 0.5 and then back.
COMPARING NUMBERS	- Read, write, order and compare numbers up to 10 000000 and determine the value of each digit - Order positive and negative whole numbers - Find the difference between a positive and a negative integer, or two negative integers, in the context such as temperature or a number line. - Order a set of negative integers.
ROUNDING	- Round any whole number to a required degree of accuracy - Round whole numbers to the nearest 10, 100, 1000.
NUMBER BONDS	Find pairs with sum of 100; multiples of 50 with sum 1000, decimals with sum of 0.1, 1, 10
MENTAL CALCULATION	- Add/subtract any pair of two-digit numbers including crossing 100; - Derive sums and differences, e.g. 760 ± 280. - Add/subtract a multiple of 10, 100, 1000 and adjust. - Multiply or divide whole numbers by 10, 100 or 1000. - Understand and use relationships between the 4 operations, and the principles of the arithmetic laws. - Use related facts and doubling or halving e.g. halve an even number, double the other; multiply by 25, by $\times 100$, then divide by 4. - Express a quotient as a fraction, or as a decimal rounded to 1 decimal place. Dividing £ and pence by a two-digit number to give £ and pence.
MULTIPLICATION & DIVISION FACTS	- Recall multiplication and division facts to 12×12. - Use known facts and place value to multiply and divide mentally.
WRITTEN CALCULATION	- Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication - Divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE & CUBE NUMBERS	- identify common factors, common multiples and prime numbers - Give pairs of factors for whole numbers to 100. Use tests of divisibility. - Recall squares to 12×12. - Find simple common multiples. Know tests of divisibility. - Recognise primes to at least 20. Find prime factors. - Factorise numbers to 100 into prime factors.
EQUATIONS	- Express missing number problems algebraically - Use brackets.
COUNTING IN FRACTIONAL STEPS	Count up and down in $\frac{1}{2}$, $\frac{1}{4}$, etc using whole numbers and decimal numbers.
RECOGNISING FRACTIONS	- Recognise equivalent fractions. - Know simple fractions as percentages; find simple percentages. - Understand percentage as the number of parts in every 100.

COMPARING FRACTIONS	- compare and order fractions, including fractions >1 - Change an improper fraction to a mixed number and vice versa. - Order fractions by converting to common denominator, and position them on a number line. - Express simple fractions as percentages. - Find simple percentages of whole number quantities, include using calculator
COMPARING DECIMALS	- identify the value of each digit in numbers given to three decimal places - Multiply and divide decimals by 10 or 100, and integers by 1000, and explain the effect. - Give a decimal lying between two others e.g. 3.4 and 3.5. - Order a set of mixed numbers or measurements with up to 3 decimal places. - Round a number to the nearest tenth or nearest whole number.
EQUIVALENCE	- use common factors to simplify fractions; use common multiples to express fractions in the same denomination - associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)
MULTIPLICATION & DIVISION OF DECIMALS	- multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) - divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)
RATIO & PROPORTION	- solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts - solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison - Solve simple problems involving ratio and proportion.
POSITION, DIRECTION & MOVEMENT	- describe positions on the full coordinate grid (all four quadrants) - Read and plot co-ordinates in all four quadrants. - draw and translate simple shapes on the coordinate plane, and reflect them in the axes. - Recognise where a shape will be after two translations. - Recognise where shape will be after 90° rotation about vertex. - Recognise where shape will be after reflection in a line not parallel to a side or in two mirrors at 90°.
IDENTIFYING SHAPES & THEIR PROPERTIES	- Recognise, describe and build simple 3-D shapes, including making nets - Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
COMPARING & CLASSIFYING	- compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons - Classify quadrilaterals using side/angle properties.
MEASURING & CALCULATING	Length: - Convert larger to smaller units of length and vice versa. - Know mile and km equivalents. Mass: - Use, read and write standard metric units of mass and abbreviations. - Know relationships. Convert larger to smaller units and vice versa.

	• Know approximate metric equivalents for pounds (lb) and ounces (oz). • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [e.g. mm^3 and km^3].
CONVERTING	• convert between miles and kilometres • Convert between km, m, cm, mm. • Convert between kg and g, litres and millilitres, seconds and minutes.