

Mathematics steps 31 to 33

Place Value	I can read, write, order and compare numbers up to 10 000 000 and say the value of each digit	I can round any whole number to a required degree of accuracy.	I can understand and use negative numbers in context, and count on a number line past zero.	I can understand and use negative numbers in context, and count on a number line past zero.	I can solve number and practical problems that involve place value
Addition, Subtraction, Multiplication & Division	I can multiply multi-digit numbers up to 4 digits by a two-digit whole number.	I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	I can divide numbers up to 4 digits by a two-digit number and give remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.	I can divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and give remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.	I can do mental calculations, including with mixed operations and large numbers.
	I can identify common factors, common multiples and prime numbers.	I can use my knowledge of the order of operations to carry out calculations involving the four operations (BIDMAS).	I can solve addition and subtraction multi-step problems, deciding which operations and methods to use and why	I can solve problems involving addition, subtraction, multiplication and division.	I can use estimation to check answers to calculations
	I can estimate with an appropriate degree of accuracy.	Statistics	I can interpret pie charts and line graphs and use these to solve problems.	I can construct pie charts and line graphs.	I can calculate and interpret the mean as an average.
Fractions (including decimals & %)	I can use common factors to simplify fractions	I can use common multiples to show with the same denominator	I can compare and order fractions, including fractions greater than 1.	I can add and subtract fractions with different denominators and mixed numbers, using equivalent fractions.	I can multiply simple pairs of proper fractions, writing the answer in its simplest form for example, $1/4 \times 1/2 = 1/8$.
	I can divide proper fractions by whole numbers for example, $1/3 \div 2 = 1/6$.	I can associate a fraction with division and calculate decimal fraction equivalents 0.375 for a simple fraction $3/8$.	I can identify the value of each digit in numbers up to three decimal places	I can multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	I can multiply one-digit numbers with up to two decimal places by whole numbers.
	I can use written division methods where the answer has up to two decimal places.	I can solve problems which require answers to be rounded.	I can recall and use equivalences between simple fractions, decimals and percentages.		
Ratio &	I can using multiplication and division to solve problems about ratio and proportion.	I can solve problems involving the calculation of percentages	I can use scale factor of shapes to solve problems	I can use fractions to be able to solve problems about ratio and proportion.	
Algebra	I can use simple formulae.	I can generate and describe linear number sequences.	I can express missing number problems algebraically.	I can find pairs of numbers that solve an equation with two unknowns.	I can explain and communicate possibilities of combinations of two variables.
Measurement	I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places.	I can 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	I can convert between miles and kilometres.	I can recognise that shapes with the same areas can have different perimeters and vice versa.	I can recognise when it is possible to use formulae for area and volume of shapes
	I can calculate the area of parallelograms and triangles.	I can calculate, estimate and compare volume of cubes and cuboids using standard units.			
Properties of Shapes	I can draw 2-D shapes using given dimensions and angles.	I can recognise, describe and build simple 3-D shapes, including making nets	I can compare and classify geometric shapes based on their properties and sizes.	I can find unknown angles in any triangles, quadrilaterals, and regular polygons.	I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
	I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles		Position and Direction	I can describe positions on a coordinate grid in all four quadrants.	I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

