Year 6 Autumn Term								
Number and place value	**Addition, subtraction, multiplication and division**	**Fractions (including decimals and percentages)**	**Ratio and proportion**	**Algebra**	**Measurement**	**Geometry: properties of shapes**	**Geometry: position, and direction**	**Statistics**
Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve all of the above.	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. 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 long/short division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. Use knowledge of order of operations to carry out calculations involving the four operations. Solve problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Identify common factors, common multiples and prime numbers.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions >1. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing answers in the simplest form. Divide proper fractions by whole numbers. Associate a fraction with division and calculate decimal fraction equivalents. Use written division methods in cases where the answer has to be rounded up to 2 decimal places. Solve problems which require answers to be rounded to specified degrees of accuracy. Identify the value of each digit in numbers given to three decimal places and multiply numbers by 10, 100 and 1,000. Multiply 1-digit numbers up to 2 decimal places by whole numbers. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	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 unequal sharing and grouping using knowledge of fractions and multiples. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving the calculation of percentages and the use of percentages for comparison.	Generate and describe linear number sequences. Use simple formulae. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Investigate and enumerate possibilities of combinations of two variables.	Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume of shapes. Calculate the area of parallelograms and triangles. Calculate, estimate and compare volumes of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3) and extending to other units (eg; mm^3 and km^3). 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 to up to three decimal places.	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. Draw 2D shapes using given dimensions and angles.	Describe positions on the full coordinate grid (all four quadrants). Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average.
1 week	**3 weeks**	**2 weeks**	**1 week**	**1 week**	**1 week**	**1 week**	**1 week**	**1 week**