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| **Objectives** | **Autumn** | **Spring** | **Summer** |
| * Use negative numbers in context, and calculate intervals across zero. * Round any whole number to a required degree of accuracy and solve problems which require answers to be rounded to a specific degree of accuracy. * Solve problems involving the relative sizes of two quantities where the missing values can be found by using integer multiplication and division facts. * Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. * Solve problems involving the calculation of percentages, (for example, of measures) such as 20% of 440 and the use of percentages for comparison. * Multiply 1-digit numbers with up to two decimal places by whole numbers. * Perform mental calculations, including with mixed operations with large numbers. * Divide numbers up to 4-digits by a 2-digit whole number using formal written methods of long division and interpret remainder in various ways. * Use knowledge of order of operations to carry out calculations involving all four operations. * Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. * Multiply simple pairs of proper fractions, writing the answer in its simplest form. * Divide proper fractions by whole numbers (⅛ ÷ 2 = 1/16) * Associate a fraction with division and calculate decimal fraction equivalents (for example, 0.375 for ⅜) * Express missing number problems algebraically. * Find pairs of numbers that satisfy number sentences involving two unknowns. * Recognise, describe and build simple 3D shapes, including making nets. * Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangle, quadrilateral and regular polygons. * Illustrate and name parts of circles, including radius, diameter and circumference and know that the radius is half the diameter. * 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 3 decimal places. * Calculate the area of a parallelogram and triangles and calculate, estimate and compare volume of cubes and cuboids using standard units. * Interpret and construct pie charts and line graphs and use these to solve problems. | * Round any whole number to a required degree of accuracy and solve problems which require answers to be rounded to a specific degree of accuracy. * Multiply 1-digit numbers with up to two decimal places by whole numbers.   Divide numbers up to 4-digits by a 2-digit whole  number using formal written methods of long  division and interpret remainder in various ways.   * Recognise, describe and build simple 3D shapes, including making nets. * Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. * Multiply simple pairs of proper fractions, writing the answer in its simplest form. * Divide proper fractions by whole numbers (⅛ ÷ 2 = 1/16) * Associate a fraction with division and calculate decimal fraction equivalents (for example, 0.375 for ⅜) | * Use negative numbers in context, and calculate intervals across zero. * Solve problems involving the relative sizes of two quantities where the missing values can be found by using integer multiplication and division facts. * Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. * Perform mental calculations, including with mixed operations with large numbers. * Illustrate and name parts of circles, including radius, diameter and circumference and know that the radius is half the diameter. * Illustrate and name parts of circles, including radius, diameter and circumference and know that the radius is half the diameter. * Calculate the area of a parallelogram and triangles and calculate, estimate and compare volume of cubes and cuboids using standard units. | * Solve problems involving the calculation of percentages, (for example, of measures) such as 20% of 440 and the use of percentages for comparison. * Use knowledge of order of operations to carry out calculations involving all four operations. * Express missing number problems algebraically. * Find pairs of numbers that satisfy number sentences involving two unknowns. * Interpret and construct pie charts and line graphs and use these to solve problems. * 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 3 decimal places. * Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangle, quadrilateral and regular polygons. |