

Year 6 Curriculum	Number and place value	Addition and subtraction Multiplication & division	Fractions, Percentages and Decimals	Ratio, Proportion and Algebra
<p data-bbox="94 220 264 245">Autumn term</p> 	<ul data-bbox="349 225 725 783" style="list-style-type: none"> • Secure knowledge of place value with numbers to 2 decimal places • Count on and back from any given number in powers of 10 • Know the number that is a power of 10 more/less than any number up to ten million • Be able to read, write, partition and know the value of each digit of numbers up to ten million • Estimate to the nearest 10, 100, 1000, 10000, 100,000 and 1000,000 • Solve problems in different contexts • Use approximation to estimate and check answers to calculations and determine the levels of accuracy 	<ul data-bbox="801 225 1155 1166" style="list-style-type: none"> • Know times tables to 12 x 12 and the related division facts and relate to multiples of 10 • Find common factors of two or more numbers • Identify prime numbers and explore patterns within them • Multiply and divide numbers mentally using known facts • Use the method of short division for a 4 digit number by a single digit number and also a 3 digit number by a 2 digit number • Secure multiplication of numbers up to 4 digit numbers by a single digit using a written method • Derive related facts using known multiplication and division facts including decimals (00.9 x 7) • Multiply 2 and 3 digit numbers by a 2 digit number using long multiplication • Secure division of three digit numbers by two digit numbers using short division, expressing remainders as a whole number, decimal or fraction • Solve problems using all four operations 	<ul data-bbox="1234 225 1666 959" style="list-style-type: none"> • Simplify fractions using common factors • Find equivalent fractions using multiplication facts • Express two fractions so they have the same denominator (1/6 and 5/12.....1/6 becomes 2/12) • Compare and order fractions including fractions > 1 • Add/subtract fractions with different denominators using equivalence • Add/subtract mixed numbers with different denominators using equivalence • Read, write and order decimals with up to 3 decimal places • Round decimals to 2 decimal places • Multiply and divide numbers by 10, 100, 1000 and explain the movement of digits left and right (answers can be up to 3 decimal places) • Recall and use equivalences between simple fractions, decimals and percentages 	<ul data-bbox="1742 225 2141 991" style="list-style-type: none"> • Solve scaling problems in a range of contexts • Know that scaling up involves multiplication and scaling down involves division • To know that the scale factor is the amount by which an object has been enlarged or reduced • Enlarge or reduce a shape using a given scale factor • Identify the scale factor used to enlarge or reduce a shape • Express the relationship between numbers in words then symbols • Understand algebra as an aspect where letters and symbols represent the unknown • Form and solve equations using simple shapes • Substitute a given value for an unknown • Understand that letters and numbers together make expressions • To understand that expressions can be simplified

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<p>Spring term</p> 	<ul style="list-style-type: none"> Secure knowledge of place value with numbers to 2 decimal places Count on and back from any given number in powers of 10 Know the number that is a power of 10 more/less than any number up to ten million Be able to read, write, partition and know the value of each digit of numbers up to ten million Estimate to the nearest 10, 100, 1000, 10000, 100,000 and 1000,000 Solve problems in different contexts Identify and position positive and negative numbers on a number line Compare negative numbers using $<$ $>$ symbols Order a set of positive and negative numbers in a given context Calculate intervals between positive and negative numbers by finding the difference Solve problems involving negative numbers in different contexts Use approximation to estimate and check answers to calculations and determine the levels of accuracy 	<ul style="list-style-type: none"> Know times tables to 12×12 and the related division facts and relate to multiples of 10 Find common factors of two or more numbers Identify prime numbers and explore patterns within them Multiply and divide numbers mentally using known facts Use the method of short division for a 4 digit number by a single digit number and also a 3 digit number by a 2 digit number Secure multiplication of numbers up to 4 digit numbers by a single digit using a written method Derive related facts using known multiplication and division facts including decimals (00.9×7) Multiply 4 digit numbers by a 2 digit number using long multiplication Secure division of three/four digit numbers by two digit numbers using short and long division, expressing remainders as a whole number, decimal or fraction Solve problems using all four operations Use brackets to explore the order of operations using BODMAS Calculate mentally using factors Secure knowledge of brackets to determine the order of operations Perform mental calculations including mixed operations Multiply one digit numbers with up to 2 decimal places by a whole number (2.75×8) 	<ul style="list-style-type: none"> Simplify fractions using common factors Find equivalent fractions using multiplication facts Express two fractions so they have the same denominator ($1/6$ and $5/12$.....$1/6$ becomes $2/12$) Compare and order fractions including fractions > 1 Add/subtract fractions with different denominators using equivalence Add/subtract mixed numbers with different denominators using equivalence Read, write and order decimals with up to 3 decimal places Round decimals to 2 decimal places Multiply and divide numbers by 10, 100, 1000 and explain the movement of digits left and right (answers can be up to 3 decimal places) Recall and use equivalences between simple fractions, decimals and percentages Find equivalent fractions with a given numerator or denominator Write a fraction in its simplest form using equivalence Multiply simple pairs of proper fractions Divide a proper fraction by whole numbers To know that a percentage is a way of expressing a fraction as parts of a hundred To find 10% by dividing by 10 and to find 1% you divide by 100 To explain how to find percentages of amounts (17% of 200) To calculate percentages that go beyond multiples of 5 and 10 To solve missing number box percentage problems To solve problems involving percentages 	<ul style="list-style-type: none"> Solve scaling problems in a range of contexts Know that scaling up involves multiplication and scaling down involves division To know that the scale factor is the amount by which an object has been enlarged or reduced Enlarge or reduce a shape using a given scale factor Identify the scale factor used to enlarge or reduce a shape Express the relationship between numbers in words then symbols Understand algebra as an aspect where letters and symbols represent the unknown Form and solve equations using simple shapes Substitute a given value for an unknown Understand that letters and numbers together make expressions To understand that expressions can be simplified To understand that a linear sequence continues as a constant whereas a non-linear does not Identify and describe the rule for a sequence Understand that a formula may be written to describe a rule To investigate special sequences (Fibonacci)

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<p>Summer term</p> 	<ul style="list-style-type: none"> Secure knowledge of place value with numbers to 3 decimal places Count on and back from any given number in powers of 10 Know the number that is a power of 10 more/less than any number up to ten million Be able to read, write, partition and know the value of each digit of numbers up to ten million Estimate and round to the nearest 10, 100, 1000, 10000, 100,000 and 1000,000 Solve problems in different contexts Identify and position positive and negative numbers on a number line Compare negative numbers using $<$ $>$ symbols Order a set of positive and negative numbers in a given context Calculate intervals between positive and negative numbers by finding the difference Solve problems involving negative numbers in different contexts Use approximation to estimate and check answers to calculations and determine the levels of accuracy 	<ul style="list-style-type: none"> Know times tables to 12 x 12 and the related division facts and relate to multiples of 10 Use known facts to derive related facts fluently Secure knowledge of multiples, factors, primes, squares and cubes To know the prime numbers to at least 19 To know square numbers to 144 Secure knowledge of mental strategies including with mixed operations and large numbers Use estimation and rounding to check answers and to make sensible estimates Solve multi-step worded problems for all four operations Find common factors of two or more numbers Identify prime numbers and explore patterns within them Multiply and divide numbers mentally using known facts Use the method of short division for a 4 digit number by a single digit number and also a 3 digit number by a 2 digit number Secure multiplication of numbers up to 4 digit numbers by a single digit using a written method Derive related facts using known multiplication and division facts including decimals (0.09 x 7) Multiply 4 digit numbers by a 2 digit number using long multiplication To use long division with 2 digit divisors Secure division of three/four digit numbers by two digit numbers using short and long division, expressing remainders as a whole number, decimal or fraction Use brackets to explore the order 	<ul style="list-style-type: none"> Simplify fractions using common factors Find equivalent fractions using multiplication facts Express two fractions so they have the same denominator (1/6 and 5/12.....1/6 becomes 2/12) Compare and order fractions including fractions $>$ 1 Add/subtract fractions with different denominators using equivalence Add/subtract mixed numbers with different denominators using equivalence Read, write and order decimals with up to 3 decimal places Round decimals to 2 decimal places Multiply and divide numbers by 10, 100, 1000 and explain the movement of digits left and right (answers can be up to 3 decimal places) Recall and use equivalences between simple fractions, decimals and percentages Find equivalent fractions with a given numerator or denominator Write a fraction in its simplest form using equivalence Multiply simple pairs of proper fractions Divide a proper fraction by whole numbers To know that a percentage is a way of expressing a fraction as parts of a hundred To find 10% by dividing by 10 and to find 1% you divide by 100 To calculate simple fractions, decimals and percentages in different contexts To explain how to find percentages of amounts (17% of 200) To calculate percentages that go beyond multiples of 5 and 10 To solve missing number box percentage problems To solve problems involving percentages Calculate the decimal fraction equivalent for a simple fraction using division Add/subtract mixed numbers and different denominators 	<ul style="list-style-type: none"> Solve scaling problems in a range of contexts Know that scaling up involves multiplication and scaling down involves division To know that the scale factor is the amount by which an object has been enlarged or reduced Enlarge or reduce a shape using a given scale factor Identify the scale factor used to enlarge or reduce a shape Use simple ratio and proportional reasoning to solve problems Express the relationship between numbers in words then symbols Understand algebra as an aspect where letters and symbols represent the unknown Form and solve equations using simple shapes Substitute a given value for an unknown Understand that letters and numbers together make expressions To understand that expressions can be simplified To understand that a linear sequence continues as a constant whereas a non-linear does not Identify and describe the rule for a sequence Understand that a formula may be written to describe a rule To investigate special sequences (Fibonacci) To know that ratio compares one part to another Proportion compares one part to the whole Solve problems using a four cell diagram Express missing number problems algebraically Find pairs of numbers that satisfy an

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		<p>of operations using BODMAS</p> <ul style="list-style-type: none"> • Calculate mentally using factors • Secure knowledge of brackets to determine the order of operations • Perform mental calculations including mixed operations and large numbers 	<ul style="list-style-type: none"> • Multiply one digit numbers with up to 2 decimal places (5.64×12) • Divide two or three digit numbers by two digit numbers where the answer has up to two decimal places • Divide decimal numbers by one digit whole numbers • Solve problems which require answers to be rounded to specified degrees of accuracy 	<p>equation involving two unknowns</p> <ul style="list-style-type: none"> • Enumerate all possibilities of combinations of two variables $A + A + A + B + B$ A and B are worth two different whole numbers. The sum above is 30. What is the value of A and B?