

Year 5 Curriculum	Number and place value	Addition and subtraction	Multiplication and Division	Fractions
<p data-bbox="94 220 264 245">Autumn term</p> 	<ul data-bbox="349 220 728 724" style="list-style-type: none"> • Count on and back in 10s, 100s and 1000s from any number crossing boundaries • Read and write numbers to 1 million • Know the value of each digit in any number up to 1 million • Partition numbers in different ways • Order numbers up to 1 million • To know 10, 100, 1000 more or less than any number up to 1 million • Count forwards and backwards in steps of powers of 10 • Round numbers to the nearest 10, 100, 1000, 10000, 100,000 	<ul data-bbox="804 220 1155 783" style="list-style-type: none"> • Recall decimal bonds (tenths) with a total of 1 • Mentally, add decimals to 1 and 10... $3.6 + 6.4 = 10$ • To add two or three 4 digit numbers using the column written method • Add and Subtract whole numbers with up to 5 digits using the column method (with exchanging) • Solve 2 step word problems in a range of contexts • Mentally, add and subtract multiples of 10, 100, 1000, 10000 and 100,000 • Use a written method to add and subtract decimals up to 2 decimal places 	<ul data-bbox="1236 220 1588 1082" style="list-style-type: none"> • Rehearse and apply multiplication and division facts to 12×12 • Understand and identify common multiples • Know that a factor is a whole number that divides exactly into another whole number • Identify factors of two digit numbers by deriving division facts • Identify and recognise square numbers • Solve problems of multiplication and division including knowledge of factors, multiples and square numbers • Multiply and divide by multiples of 10, 100 and 1000 with whole and decimal numbers • Mentally, multiply and divide by 10 and 100 • Multiply a 2 digit number by a single digit (mentally) $23 \times 6 =$ • Multiply and divide numbers with up to 4 digits by a single digit using a written method 	<ul data-bbox="1668 220 2136 938" style="list-style-type: none"> • Count in simple fractions • To know that fractions can express proportion $3/5$ relates to 3 out of 5 • Identify equivalent fractions including tenths and hundredths • Understand that multiplying and dividing the numerator/denominator by the same number creates an equivalent fraction • Order fractions where the denominators are multiples of the same number $2/3$, $4/9$, $7/12$ • Place fractions on a number line • To understand what a proper, mixed and improper fraction is • To convert improper fractions to mixed numbers and vice versa • To compare and order decimals with up to three decimal places • To round decimals with two decimal places to the nearest whole number and to one decimal place • To solve problems involving fractions and decimals, explaining reasoning

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<p>Spring term</p> 	<ul style="list-style-type: none"> Count on and back in 10s, 100s and 1000s from any number crossing boundaries Read and write numbers to 1 million Know the value of each digit in any number up to 1 million Partition numbers in different ways Order numbers up to 1 million To know 10, 100, 1000 more or less than any number up to 1 million Count forwards and backwards in steps of powers of 10 Round numbers to the nearest 10, 100, 1000, 10000, 100,000 Count forwards and backwards through zero Compare negative numbers when using the < > symbols Place negative numbers on a number line and order a set of positive and negative numbers Solve problems involving negative numbers in different contexts To know the Roman numerals: I = 1 V = 5 X = 10 L = 50 C = 100 D = 500 To read and write numbers in Roman numerals Order and compare numbers written in Roman numerals 	<ul style="list-style-type: none"> Recall decimal bonds (tenths and hundredths) with a total of 1 To know what must be added to make the next whole number $3.6 + \underline{\quad} = 4$ Mentally, add decimals to make 1 and 10... $3.6 + 6.4 = 10$ Add and Subtract whole numbers with up to 5 digits using the column method (with exchanging) Solve 2 step word problems in a range of contexts Mentally, add and subtract multiples of 10, 100, 1000, 10000 and 100,000 Use a written method to add and subtract decimals up to 2 decimal places To understand that 10 tenths make a whole and 10 hundredths makes a tenth Solve missing number calculations using knowledge of number facts, rounding and inverses Solve multi-step word problems in a range of contexts including money and measures choosing the most appropriate method 	<ul style="list-style-type: none"> Rehearse and apply multiplication and division facts to 12×12 Understand and identify common multiples Know that a factor is a whole number that divides exactly into another whole number Identify factors of two digit numbers by deriving division facts Identify and recognise square numbers and squares of multiples of 10 To understand the definition of a prime number as a number having only 2 factors Solve problems of multiplication and division including knowledge of factors, multiples and square numbers Multiply and divide by multiples of 10, 100 and 1000 with whole and decimal numbers Mentally, multiply and divide by 10 and 100 Multiply a 2 digit number by a single digit (mentally) $23 \times 6 =$ Multiply and divide numbers with up to 4 digits by a single digit and now a 2 digit number using a written method $364 \times 25 =$ Divide numbers with up to 4 digits by a single digit using short division, expressing remainders as fractions Solve division problems interpreting non-integer answers in different ways such as with remainders, fractions (mixed numbers) or by rounding 	<ul style="list-style-type: none"> Count on and backwards in simple fractions, improper fractions and with mixed numbers To add and subtract fractions with the same denominator Add and subtract fractions with denominators that are multiples of the same number (applied to problem solving) To know that fractions can express proportion $3/5$ relates to 3 out of 5 Identify equivalent fractions including tenths and hundredths Understand that multiplying and dividing the numerator/denominator by the same number creates an equivalent fraction Order fractions where the denominators are multiples of the same number $2/3, 4/9, 7/12$ Place fractions on a number line To understand what a proper, mixed and improper fraction is To convert improper fractions to mixed numbers and vice versa To compare and order decimals with up to three decimal places To round decimals with two decimal places to the nearest whole number and to one decimal place To solve problems involving fractions and decimals, explaining reasoning To find fractions of numbers and quantities using division and multiplication Read and write decimal numbers as fractions $19/100 = 0.19$ and vice versa $30/100 = 0.3$ $8/10 = 0.8$ To know that $1/10 = 10/100 = 100/1000$ And $1/100 = 10/1000$ Use equivalent fractions involving tenths, hundredths, thousandths to write the decimal equivalent $1/5 = 2/10 = 0.2$ Reinforce the equivalence between fractions and decimals
<p>Summer term</p>	<ul style="list-style-type: none"> Count on and back in 10s, 100s and 1000s from any number crossing boundaries and 	<ul style="list-style-type: none"> Recall decimal bonds (tenths and hundredths) with a total of 1 	<ul style="list-style-type: none"> Rehearse and apply multiplication and division facts to 12×12 	<ul style="list-style-type: none"> Count on and backwards in simple fractions, improper fractions and with mixed numbers

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	<ul style="list-style-type: none"> negative numbers Extend and find missing numbers in a given sequence involving decimals and fractions Describe and extend sequences involving negative numbers Extend linear and non-linear sequences Solve problems involving sequences and explain reasoning Read and write numbers to 1 million Know the value of each digit in any number up to 1 million Partition numbers in different ways Order numbers up to 1 million To know 10, 100, 1000 more or less than any number up to 1 million Count forwards and backwards in steps of powers of 10 Round numbers to the nearest 10, 100, 1000, 10000, 100,000 Count forwards and backwards through zero Compare negative numbers when using the < > symbols Place negative numbers on a number line and order a set of positive and negative numbers Solve problems involving negative numbers in different contexts To know the Roman numerals: I = 1 V=5 X=10 L=50 C=100 D=500 To read and write numbers in Roman numerals Order and compare numbers written in Roman numerals Find a number halfway between two given numbers (-15 and 7) Estimate the point on a blank number line using your knowledge of place value 	<ul style="list-style-type: none"> To know what must be added to make the next whole number $3.6 + \underline{\quad} = 4$ Mentally, add decimals to make 1 and 10... $3.6 + 6.4 = 10$ Add and Subtract whole numbers with up to 5 digits using the column method (with exchanging) Solve 2 step word problems in a range of contexts Mentally, add and subtract multiples of 10, 100, 1000, 10000 and 100,000 Use a written method to add and subtract decimals up to 2 decimal places To understand that 10 tenths make a whole and 10 hundredths makes a tenth Solve missing number calculations using knowledge of number facts, rounding and inverses Solve multi-step word problems in a range of contexts including money and measures choosing the most appropriate method Find the difference by counting up using an empty number line Use and apply the column written method to solve multi-step problems in a range of contexts To add and subtract decimal numbers mentally To use rounding to check the accuracy of your answer when solving problems To use knowledge of addition and place value to reason about number 	<ul style="list-style-type: none"> Understand and identify common multiples Know that a factor is a whole number that divides exactly into another whole number Identify factors and common factors of two digit numbers by deriving division facts Identify and recognise square numbers and squares of multiples of 10 To understand the definition of a prime number as a number having only 2 factors Identify prime numbers within 100 Solve problems of multiplication and division including knowledge of factors, multiples and square numbers To recognise cubed numbers Multiply and divide by multiples of 10, 100 and 1000 with whole and decimal numbers Mentally, multiply and divide by 10 and 100 Mentally, multiply and divide drawing upon known facts Multiply a 2 digit number by a single digit (mentally) $23 \times 6 =$ Multiply and divide numbers with up to 4 digits by a single digit and now a 2 digit number using a written method $364 \times 25 =$ Multiply a 2 digit number by 2 digit number using long multiplication Divide numbers with up to 4 digits by a single digit using short division, expressing remainders as fractions Solve division problems interpreting non-integer answers in different ways such as with remainders, fractions (mixed numbers) or by rounding Solve problems involving multiplication and division including rates of pay 	<ul style="list-style-type: none"> To add and subtract fractions with the same denominator Add and subtract fractions with denominators that are multiples of the same number (applied to problem solving) To know that fractions can express proportion $\frac{3}{5}$ relates to 3 out of 5 Identify equivalent fractions including tenths and hundredths Understand that multiplying and dividing the numerator/denominator by the same number creates an equivalent fraction Order fractions where the denominators are multiples of the same number $\frac{2}{3}$, $\frac{4}{9}$, $\frac{7}{12}$ Place fractions on a number line To understand what a proper, mixed and improper fraction is To convert improper fractions to mixed numbers and vice versa To compare and order decimals with up to three decimal places To round decimals with two decimal places to the nearest whole number and to one decimal place To solve problems involving fractions and decimals, explaining reasoning To find fractions of numbers and quantities using division and multiplication Read and write decimal numbers as fractions $\frac{19}{100} = 0.19$ and vice versa $\frac{30}{100} = 0.3$ $\frac{8}{10} = 0.8$ To know that $\frac{1}{10} = \frac{10}{100} = \frac{100}{1000}$ And $\frac{1}{100} = \frac{10}{1000}$ Use equivalent fractions involving tenths, hundredths, thousandths to write the decimal equivalent $\frac{1}{5} = \frac{2}{10} = 0.2$ Reinforce the equivalence between fractions and decimals To recognise the % sign as number of parts per 100 Convert percentages/fractions and decimals To identify a percentage of a shape To solve problems involving percentages To find 25%, 50% and 75% To find 1%, 10% and other multiples of 10% by dividing by 10 To multiply proper fractions and mixed numbers by whole numbers Connect multiplication by a fraction to using fractions as operators ($\frac{1}{4}$ of 8 is the same as $\frac{1}{4} \times 8$)