Mathematics Target Related Expectations (TReE)

	Pathway 1 (Target Grade 1-3)	Pathway 2 (Target Grade 4-6)	Pathway 3 (Target Grade 7-8)
number	**2 Number skills**	**2 Number skills**	**2 Number skills**
	Add numbers and subtract together in different ways.	Know and use the priority of operations and laws of arithmetic.	Understand the difference between multiples, factors and primes.
	Round to the nearest 10.	Recall multiplication facts up to 10 × 10.	Find all the factor pairs of any whole number.
	Approximate before adding and subtracting.	Multiply and divide by 10, 100, 1000.	Find the HCF and LCM of two numbers.
	Divide one number by another.	Round whole numbers to the nearest 10, 100, 1000.	Add, subtract, multiply and divide positive and negative numbers.
	Use approximation to estimate division calculations.	Add, subtract, divide and multiply whole numbers using written methods.	Use mental and written strategies for multiplication.
	Multiply numbers.	Check answers using inverse operations.	Divide a 3-digit integer by a single or 2-digit integer.
	Recognise multiples.	Solve problems involving time and money using a calculator.	Use index notation for squares and square roots.
	Recognise square numbers.	Order positive and negative numbers.	Calculate with squares and square roots.
	Find roots of square numbers on a calculator.	Add and subtract positive and negative numbers.	Use factorising to work out square roots and cube roots.
	Use times tables to help you divide.	Identifying and understanding factors, multiples and prime numbers.	Solve word problems using square roots and cube roots.
	Use approximation to estimate division calculations.	Begin to multiply with negative numb	Estimate answers to complex calculations.
	Multiply and divide by 10, 100 and 1000.	Recognise and use square numbers, square roots and triangle numbers.	Carry out calculations involving brackets.
	Use simple negative numbers.		
	Solve simple ratio and proportion problems.	**11 Number**	**6 Decimals**
	Continue a sequence.	Use written methods to add and subtract with decimals.	Write decimals in ascending and descending order.
	5 Factors and multiples	Estimate answers to calculations.	Round to decimal places.
	Understand the priority of operations.	Add, subtract, multiply and divide positive and negative numbers.	Add, subtract, multiply and divide decimals.
	Understand the rules of multiplication.	Calculate using squares, square roots, cubes and cube roots.	Multiply a decimal by an integer.
	Use the operation keys on a calculator.	Substitute numbers into formulas involving power, roots and brackets.	Convert between fractions decimals and percentages.
	Multiply and divide 3-digit numbers by a single digit.	Use index notation for powers of numbers.	Compare different proportions using percentages.
	Round numbers to the nearest 100 and 1000.	Estimate the square root of a number.	Calculate percentages with and without a calculator, increase, decrease and reverse questions.
	Recognise multiples of 2, 5, 10 and 25.	Write a number as a product of its prime factors.	**8 Multiplicative reasoning**
	Begin to identify factors of numbers.	Use prime factor decomposition to find the HCF and LCM.	Convert between metric and imperial units.

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Solve problems involving multiplication and division.	**4 Decimals and measures**	**8 Multiplicative reasoning**
Use a calculator to solve multiplication and division problems.	Measure and draw lines to the nearest millimetre.	Write a ratio in its simplest form.
Recognise and use multiples, factors and primes.	Write decimals in order of size.	Simplify a ratio expressed in fractions or decimals.
Find common factors and common multiples.	Round decimals to the nearest whole number and to one decimal place.	Share a quantity in 2 or more parts in a given ratio.
Work out the HCF and LCM of two numbers.	Compare measurements by converting them into the same units.	Understand the relationship between ratio and proportion.
6 Decimals and measures	Convert between metric units of length, mass and capacity.	Solve simple word problems involving ratio and direct/inverse proportion.
Estimate, and choose suitable units, to measure length, mass and capacity.	Read scales on a range of measuring equipment.	Write ratios in the form $1 : n$
Draw lines to the nearest millimetre and measure lines to the nearest centimetre.	Interpret the display of a calculator in different contexts.	Solve best buy problems.
Read a variety of scales, estimates to a suitable degree of accuracy.	Add, subtract, multiply and divide decimals.	**16 Fractions, decimals and percentages**
Convert between different units of measure.	Understand where to position the decimal point by considering equivalent calculations.	Recognise fractional equivalents to important recurring decimals.
Read and write numbers in figures and words.	**5 Fractions**	Recognise which denominators of simple fractions produce recurring decimals.
Understand, compare, order and use decimals for tenths and hundredths.	Use fraction notation to describe parts of a shape.	Change a recurring decimal into a fraction.
Recognise and extend number sequences by counting in decimals.	Compare simple fractions.	Work out an original quantity before a percentage increase or decrease.
Add, subtract, Multiply and divide decimal numbers.	Change an improper fraction to a mixed number.	Calculate percentage change.
Round decimals to nearest whole number and nearest tenth.	Identify equivalent fractions.	Calculate the effect of repeated percentage changes.
Use a calculator and interpret the display in different contexts (decimals).	Simplify fractions by cancelling common factors.	**11 Factors and powers**
Use a calculator to solve word problems involving money.	Add and subtract simple fractions.	Write the prime factor decomposition of a number.
Round amounts on a calculator to 2 decimal places.	Calculate simple fractions of quantities.	Use prime factor decomposition to find the HCF or LCM or two numbers.
9 Fractions, decimals and percentages	Write one number as a fraction of another.	Work out the laws of indices for positive powers.
Order fractions.	Understand percentage as 'the number of parts per 100'.	Show that any number to the power of zero is 1.
Use fractions to describe parts of shapes.	Convert a percentage to a number of hundredths or tenths.	Use the laws of indices for multiplying and dividing.

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Identify equivalent fractions.	Work with equivalent percentages, fractions and decimals.	Use and understand powers of 10.
Simplify fractions by cancelling.	**15 Decimals and ratio**	Use the prefixes associated with powers of 10.
Change an improper fraction to a mixed number.	Rounding whole numbers and decimals.	Understand the effect of multiplying and dividing by any integer power of 10.
Calculate simple fractions of quantities.	Ordering positive and negative decimals.	Calculate with powers.
Add and subtract simple fractions.	Using the symbols > and < between two negative decimals.	Round to a number of significant figures.
Understand percentage as 'the number of parts per 100'.	Multiplying decimals with up to two decimal places.	**12 Working with powers**
Write a percentage as a fraction or decimal.	Adding, subtracting multiplying decimals of any size.	Simplify expressions involving powers and brackets.
Calculate percentages.	Using ratios involving decimals.	Understand the meaning of an identity.
11 Number properties and calculations	Solving proportion problems involving decimals.	Use the index laws in algebraic calculations and expressions.
Add, subtract, multiply and divide larger numbers.	Express one number as a percentage of another.	Simplify expressions with powers.
Add, subtract, multiply and divide with negative numbers.	**7 Ratio and proportion**	Write and simplify expressions involving brackets and powers.
Use brackets.	Use direct proportion in simple contexts.	Factorise an algebraic expression.
Work with ratios and find equivalent ratios	Use the unitary method to solve simple word problems involving direct proportion.	Substitute integers into expressions.
Solve simple word problems involving ratio.	Use ratio notation and educe a ratio to its simplest form.	Construct and solve equations.
Understand the relationship between ratio and proportion.	Divide a quantity into two parts in a ratio given in words.	
Use proportion to solve simple problems.	Use fractions to describe and compare proportions.	
19 Fractions and percentages	Understand and use the relationship between ratio and proportion.	
Compare fractions and simplify fractions.	**17 Calculating with fractions**	
Calculate with fractions mentally.	Adding and subtracting fractions with any size denominator.	
Calculate fractions of quantities.	Multiply integers and fractions by a fraction	
Multiply a fraction by a whole number.	Use appropriate methods for multiplying fractions.	
Add and subtract fractions.	Convert fractions to decimals.	
Write a number as a fraction of another number.	Write one amount as a fraction of another.	
Change between fractions and percentages.	Find the reciprocal of a number.	
Calculate percentages.	Divide integers and fractions by a fraction.	
Compare proportions using percentages.	Use strategies for dividing fractions.	

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	Write one number as a percentage of another number.	Use the four operations with mixed numbers.	
	15 Decimal calculations	**19 Percentages, decimals and fractions**	
	Add and subtract decimal numbers.	Recall equivalent fractions and decimals.	
	Multiply decimals.	Recognise recurring and terminating decimals.	
	Round decimals.	Order fractions by converting them to decimals or equivalent fractions.	
	Order decimals.	Use the equivalence of fractions, decimals and percentages to compare proportions.	
	Solve problems involving decimals.	Working out one number as a percentage of another.	
	17 Number properties	Use a multiplier to calculate percentage increase and decrease.	
	Calculate squares and square roots, mentally and using a calculator.		
	Calculate cubes and cube roots, mentally and using a calculator.		
	Carry out calculations involving brackets and square numbers.		
	Use the brackets keys on a calculator.		
	Recall and understand index notation.		