Hillstone Primary School Progression Map
Subject: Maths
Intent: At Hillstone Primary, we have adopted a mastery approach in order to deliver the three aims of the National Curriculum, fluency, reasoning and problem solving. Underpinning this pedagogy is a belief that all children can achieve in maths. We believe in promoting a sustained and deep understanding by employing a variety of mastery strategies, with teaching for conceptual understanding at the heart of everything we do. We aim to create independent mathematicians who are well equipped to apply their learning to the wider world. Our approach aims to provide all children with full access to the curriculum, enabling them to develop independence, confidence and competence – 'mastery' in mathematics in order to be independent mathematicians who are well equipped to apply their learning to the wider world
Drivers – Oracy is a key skill which is promoted daily in maths lessons as children are encouraged to talk about their learning and explain their mathematical thinking. During the 'Explore' part of the lesson, children share ideas and discuss methods by drawing on prior knowledge and applying their reasoning skills. Problem solving is one of the core foundations of mathematics and one which we expose children to in every maths lesson. Children use problem solving skills throughout the maths lesson, but particularly during the 'Explore' section and during independent work. Children are taught a range of strategies to help them to become logical, creative and determined problem solvers who thrive on challenge. Every lesson also contains a working deeper element to further embed problem solving skills at a deeper level. We promote well-being in maths lessons by supporting children to develop a positive growth mind set, embrace challenge and see mistakes as a learning opportunity.

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
			Number and Place Value				
Counting	Subitise (recognise quantities without counting) up to 5.

Verbally count beyond 20, recognising the pattern of the counting system. | Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number \| 25% (6.25%)

Count to 10 forwards and backwards (Own) \| 33.33% (2.08%)

Count to 20 forwards and backwards (Ch6) \| 33.33% (2.08%) | Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward \| 16.66% (3.33%)

Count in 3s from 0 (TT) \| 25% (0.83%)

Count forwards and backwards in 5s from 0 (TT) \| 25% (0.83%)

Count forwards and backwards in 2s from | Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number \| 16.67% (3.33%)

Count in multiples of 4 and 8 and use doubling to explain the relationship between them (Ch3 and TT) \| 25% (0.83%)

Count in multiples of 50 and 100 and use doubling to explain | Count in multiples of 6, 7, 9, 25 and 1000 \| 12.5% (1.88%)

Count in multiples of 6, 7 and 9 (Ch1) \| 50% (0.94%)

Count in multiples of 25 and 100 and explain the link between the two amounts (Ch1) \| 50% (0.94%)

Find 1000 more or less than a given | Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 \| 20% (4%)
Count forwards and backwards in 10s and 100s and explain how to find numbers 10 and 100 bigger or smaller than any number to 1,000,000 \| 50% (2%)
Count forwards and backwards in 1000s and 10,000s and explain how to find | |

		Count to 100 and across 100 from any given number (Ch15) | 33.33% (2.08%)	0 (TT) | 25% (0.83%)	the relationship between them (Ch1) | 25% (0.83%)	number | 12.5% (1.88%)	numbers 1000 and 10,000 bigger or smaller than any number to 1,000,000 | 50% (2%)	
		Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens | 25% (6.25%)	Count forwards and backwards in 10s from any number (Ch1) | 25% (0.83%)	Find 10 more or less than a given number and explain which digit changes and which stays the same (Ch1) | 25% (0.83%)	Find 1000 more than a given number and explain which digit changes (Ch1) | 50% (0.94%)		
		Count a number of objects to 20 (Ch6) | 20% (1.25%) 33.33% (2.08%)		Find 100 more or less than a given number and explain which digit changes and which stays the same (Ch1) | 25% (0.83%)	Find 1000 less than a given number and explain which digit changes (Ch1) | 50% (0.94%)		
		Read and write numbers from 1 to 20 in numerals and words | 25% (6.25%)			Count backwards through zero to include negative numbers | 12.5% (1.88%)		
		Read numbers from 1 – 20 in numerals (Ch6) | 25% (1.56%)			Count backwards in a range of multiples to include negative numbers and understand the value of the digits (Own) | 100% (1.88%)		
		Write numbers from 1 – 20 in numerals (Ch6) | 25% (1.56%)					
		Read numbers from 1 – 20 in words (Ch6) | 25% (1.56%)					
		Write numbers from 1 – 20 in words (Ch6) | 25% (1.56%)					

Place Value							
Have a deep understanding of number to 10, including the composition of each number.	Read numbers to 40 (Ch10) | 20% (1.25%) Read numbers to 100 (Ch15) | 20% (1.25%) Write numbers to 100 (Ch15) | 20% (1.25%) Complete missing numbers in a sequence (Ch10) | 20% (1.25%) Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least | 25% (6.25%) Compare two numbers that have been created with practical equipment and explain how they are different (Ch15) | 33.33% (2.08%)	Recognise the place value of each digit in a two-digit number (tens, ones) | 16.66% (3.33%) Identify the number of tens and ones in a 2 digit number (Ch1) | 50% (1.67%) Identify the larger of two 2 digit numbers and explain reasoning (Ch1) | 50% (1.67%) Identify, represent and estimate numbers using different representations, including the number line | 16.67% (3.33%) Create 2 digit numbers using concrete equipment and use to explain reasoning about the size of numbers (Ch1) | 50% (1.67%) Partition any 2 digit number into different combinations of tens and ones explaining their thinking using apparatus, pictorially	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) | 16.67% (3.33%) Identify the number of hundreds, tens and ones in a 3 digit number (Ch1) | 50% (1.67%) Identify, represent and estimate numbers using different representations | 16.67% (3.33%) Use representations such as dienes, place value counters and money to represent 3 digit numbers(Ch1) | 100% (3.33%) Read and write numbers up to 1000 in numerals | 16.66% (3.33%) Use understanding of numbers 1 – 100 to read and write numbers to 1000 (Ch1) | 100% (3.33%)	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) | 12.5% (1.88%)	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit | 20% (4%) Explain the place value in numbers up to 1,000,000 | 33.34% (1.33%) Order a set of numbers to 1,000,000 | 33.33% (1.33%) Compare numbers to 1,000,000 | 33.33% (1.33%)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit | 25% (2.5%) Explain the place value in numbers up to 10,000,000 | 20% (0.5%) Order a set of numbers to 10,000,000 | 20% (0.5%) Understand how a number can be partitioned into different amounts | 20% (0.5%) Multiply and divide numbers by 10 and 1000 and explain the effect on the size of the digits in the number | 20% (0.5%) Compare numbers to 10,000,000 | 20% (0.5%)

			and verbally. (Framework) | 50% (1.67%) Read and write numbers to at least 100 in numerals and in words| 16.67% (3.33%) Read numbers from 1 - 100 in numerals (Ch1) | 100% (3.33%)				
Comparing and Ordering	Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.	Order numbers to 100 (Ch15) | 33.33% (2.08%) Position two numbers on a number line and reason as to where they have been positioned (Own) |	Compare and order numbers from 0 up to 100; use <, > and = signs | 16.67% (3.33%) Position the <, > and = signs correctly between two 2 digit numbers | 100% (3.33%)	Identify the larger of two 3 digit numbers and explain reasoning (Ch1) | 50% (1.67%) Compare and order numbers up to 1000 | 16.67% (3.33%) Position 3 digit numbers on a number line and explain reasoning about where they are positioned (Own) | 100% (3.33%)	Identify the larger of two 4 digit numbers and explain reasoning (Ch1) | 100% (1.88%) Order and compare numbers beyond 1000 | 12.5% (1.88%) Identify the number of thousands, hundreds, tens and ones in a 4 digit number (Ch1) | 33.33% (0.63%) Order 4 digit numbers (Ch1) | 33.33% (0.63%) Compare 4 digit numbers (Ch1) | 33.33% (0.63%)		
Rounding					Round any number to the nearest 10,	Round any number up to 1,000,000 to	Round any whole number to a required

					100 or 1000 | 12.5% (1.88%) Round numbers to the nearest 10 (Ch1) | 25% (0.47%) Round numbers to the nearest 100 (Ch1) | 25% (0.47%) Round numbers to the nearest 1000 (Ch1) | 25% (0.47%) Explain the rules of rounding (Ch1) | 25% (0.47%)	the nearest 10, 100, 1000, 10,000 and 100,000 | 20% (4%) Understand the rules for rounding numbers and round any number up to 1,000,000 to the nearest 10 or 100 | 50% (2%) Understand the rules for rounding numbers and round any number up to 1,000,000 to the nearest , 1000, 10,000 and 100,000 | 50% (2%)	degree of accuracy | 25% (2.5%) Round numbers to the nearest 1,000,000 | 50% (1.25%) Estimate the answers to calculations by rounding and comparing answers | 50% (1.25%)
Powers of Ten					Find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths | 10% (2%) Can explain the effect of dividing a one-digit number by 10 (Ch8) | 25% (0.5%) Can explain the effect of dividing a two-digit number by 10 (Ch8) | 25% (0.5%)	Can use their knowledge of place value and multiplication and division by 10, 100 and 1000 to convert between standard units | 100% (1%)	Understands the effect of multiplying and dividing a decimal by 10, 100 and 1000 | 100% (1.82%)

					Can explain the effect of dividing a one-digit number by 100 (Ch8) | 25% (0.5%) Can explain the effect of dividing a two-digit number by 100 (Ch8) | 25% (0.5%)		
Negative Numbers						Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero | 20% (4%) Understand how to bridge through zero when counting forwards and backwards with positive and negative numbers | 50% (2%) Solve problems linked to temperature involving negative numbers | 50% (2%)	Use negative numbers in context, and calculate intervals across zero | 25% (2.5%)
Roman Numerals				Read Roman numerals to 12. (Time)	Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals | 20% (4%)	

	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
					and place value | 12.5% (1.88%) Read Roman numerals to 100 (Ch14) | 100% (1.88%)	Use Roman numerals to 100 to begin to derive Roman numerals to 1000 | 50% (2%) Recognise years written in Roman Numerals | 50% (2%)	
Solving Problems	Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	Solve practical problems using all of the above.	Use place value and number facts to solve problems | 16.67% (3.33%) Use part whole diagram to solve problems involving partitioning. (Ch1) | 50% (1.67%) Place 2 digit numbers on an unmarked number line. (Own) | 50% (1.67%)	Solve number problems and practical problems involving these ideas | 16.66% (3.33%) Solve place value problems (Ch1) | 100% (3.33%)	Solve number and practical problems that involve all of the above and with increasingly large positive numbers | 12.5% (1.88%) Solve problems involving place value, including word problems and problems linked to money and measure (Ch1) | 100% (1.88%)	Solve number and practical problems that involve all of the above and with increasingly large positive numbers and also negative mumbers.	Solve problems involving negative numbers linked to temperature, money and measures, e.g. find the difference between two temperatures when one is negative | 100% (2.5%) Solve problems involving place value, including word problems and problems linked to population of countries, money and measure | 25% (2.5%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
				==Addition and Subtraction==			
Addition and Subtraction	Explore the composition	Read, write and interpret mathematical	Recall and use addition and subtraction facts to	Add and subtract numbers mentally, including a three-	Add and subtract numbers with up to 4 digits using the	Add and subtract whole numbers with more than 4 digits,	Use their knowledge of the order of operations to carry

of numbers to 10. Automatically recall number bonds for numbers 0–5 and some to 10. Compare quantities up to 10 in different context Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	statements involving addition (+), subtraction (-) and equals (=) signs | 25% (6.25%) Begin to use addition (+), subtraction (-) and equals (=) signs to record their work (Ch3 and Ch4) | 33.34% (2.08%) Read the mathematical statements they have recorded (Ongoing) | 33.33% (2.08%) Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) (Ongoing) | 33.33% (2.08%) Represent and use number bonds and related subtraction facts within 20 | 25% (6.25%) Using apparatus represent and use number bonds and related subtraction facts up to 5 (Ch3) | 11.11% (0.69%)	20 fluently, and derive and use related facts up to 100 | 25% (5%) Relate number facts to 10 to adding and subtracting multiples of 10 within 100 (Own) | 33.33% (1.67%) Recall and use addition and subtraction facts to 20 fluently; derive and use related facts to 100 (Own) | 33.33% (1.67%) Solve missing box and missing symbol calculations, including number bonds (Own) | 33.34% (1.67%) Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers | 25% (5%)	digit number and ones, a three-digit number and tens, a three-digit number and hundreds | 25% (5%) Add and subtract numbers using place value and partitioning (Ch2) | 50% (2.5%) Count on to find the difference between two numbers (On going) | 50% (2.5%) Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction | 25% (5%) Calculate using a formal written method for TU + TU, no bridging and with bridging (Ch2) | 12.5% (0.63%) Calculate using a formal written method for HTU + TU, no bridging and with bridging (Ch2) | 12.5% (0.63%)	formal written methods of columnar addition and subtraction where appropriate | 40% (8%) Can Calculate THTU + THTU (with bridging) (Ch2) | 25% (2%) Can Calculate THTU + THTU (without bridging) (Ch2) | 25% (2%) Can calculate THTU - ThHTU (with bridging) (Ch2) | 25% (2%) Can Calculate THTU - ThHTU (without bridging) (Ch2) | 25% (2%) Can use addition and subtraction to calculate the inverse (Ch2) | 50% (2%)	including using formal written methods (columnar addition and subtraction) | 25% (5%) Can solve THTU + THTU (bridging 10 and 100) | 33.33% (1.67%) Can solve THTU - THTU (bridging 10 and 100) | 33.33% (1.67%) Can use a formal written method to add money and measure using decimal notation to tenths and hundredths | 33.33% (1.67%)	out calculations involving the four operations | 25% (3.75%) Can understand and use brackets | 50% (1.88%) Understand the order of BODMAS and use this to solve calculations | 50% (1.88%) Can use the inverse to check the answer | 50% (1.88%)

		Recall and use addition and subtraction facts for all numbers up to 5 (Ch3) | 11.11% (0.69%) Recall and use addition and subtraction facts for all numbers up to 10 fluently (Ch3) | 11.11% (0.69%) Recognise the effect of adding zero (Ch3) | 11.11% (0.69%) Using apparatus represent and use number bonds and related subtraction facts up to 20 (Ch7) | 11.11% (0.69%) Recall and use addition and subtraction facts for all numbers facts to 20 fluently (Ch7) | 11.11% (0.69%) Develop the difference between two numbers on a numberline (Ch7) | 11.11% (0.69%) Understand the inverse relationship between addition	Add and subtract a 2-digit number and 1s (Ch2) | 20% (1%) Add and subtract a 2-digit number and 10s (Ch2) | 20% (1%) Add and subtract 2 simple, 2-digit numbers, which do not involve bridging a 10 (Ch2) | 20% (1%) Adding 3 single-digit numbers (Ch2) | 20% (1%) Add and subtract and 2 digit numbers using an efficient strategy explaining their method verbally, in pictures or using apparatus with bridging (Framework) (Ch2) | 20% (1%) Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number	Calculate using a formal written method for HTU + HTU, no bridging (Ch2) | 12.5% (0.63%) Calculate using a formal written method for HTU + HTU, with bridging (Ch2) | 12.5% (0.63%) Calculate using a formal written method for TU - TU, no bridging and with bridging (Ch2) | 12.5% (0.63%) Calculate using a formal written method for HTU - TU, no bridging and with bridging (Ch2) | 12.5% (0.63%) Calculate using a formal written method for HTU - HTU, no bridging (Ch2) | 12.5% (0.63%) Calculate using a formal written method for HTU - HTU, with bridging			

		and subtraction (Ch7)	11.11% (0.69%) Solve missing number calculations to 20 (Ch7)	11.11% (0.69%)	problems	25% (5%) Recognise and use the inverse relationship between addition and subtraction (Own)	50% (2.5%)	(Ch2)	12.5% (0.63%) Understand how to use the inverse to check answers to a calculation (Own)	50% (2.5%)			
Estimation and Rounding			Check calculations using the inverse operation (Own)	50% (2.5%)	Estimate the answer to a calculation and use inverse operations to check answers	25% (5%) Round numbers to estimate answers to a problem (Own)	50% (2.5%)	Estimate and use inverse operations to check answers to a calculation	20% (4%) Can estimate the answer of an addition or subtraction calculations up to 4 digits (Ch2)	50% (2%)	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	25% (5%) Can estimate the answer up to 4 digits by rounding	100% (5%)	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	25% (3.75%) Can use estimating to consider whether their answer is appropriate	50% (1.88%)
Solving Problems		Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems, such as 7 = -9	25% (6.25%) Show that addition can be done in any order (commutative)	Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures and applying their increasing knowledge of mental and written methods	25% (5%)	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	25% (5%) Use a bar model to solve a problem (Ch2)	25% (1.25%)	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	40% (8%) Solve addition word problems (Ch2)	50% (4%) Solve subtraction word problems (Ch2)	50% (4%)	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	25% (5%) Can use addition and/or subtraction strategies to solve a one step problem	33.33% (1.67%)	Solve problems involving addition, subtraction, multiplication and division	25% (3.75%) Solve problems including those with more than one step	100% (3.75%)

		(Ch3 and Ch7) | 20% (1.25%) Show that subtraction can't be done in any order (Ch7 and Ch 4) | 20% (1.25%) Understand and use a variety of mathematical language associated with addition and subtraction, e.g. put together, add , altogether, total, take away, distance between, more than and less than (Ch11) | 20% (1.25%) Solve missing number addition and subtraction problems involving single-digit numbers (Ch11) | 20% (1.25%) Solve simple 1 step problems with addition and subtraction (Ch11) | 20% (1.25%)	Solve simple 2-step problems with addition and subtraction, applying increasing knowledge of practical, pictorial written methods (Ch9) | 33.33% (1.67%) Solve problems involving adding 2 digit numbers (Ch 9 and Ch2) | 33.33% (1.67%) Solve problems involving subtracting 2 digit numbers (Ch9 and Ch2) | 33.33% (1.67%)	Find missing box calculations (Ch2) | 25% (1.25%) Solve addition word problems (Ch2) | 25% (1.25%) Solve subtraction word problems (Ch2) | 25% (1.25%)		Can use addition and/or subtraction strategies to solve a multi-step problem | 33.33% (1.67%) Solve open-ended investigations | 33.33% (1.67%)	
Mental Methods		Add and subtract one-digit and two-digit numbers to 20, including zero | 25% (6.25%)	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:	Add and subtract numbers mentally, including: - a three-digit number and ones	Add and subtract mentally combinations of two and three digit numbers and	Add and subtract numbers mentally with increasingly large numbers | 25% (5%)	Perform mental calculations, including with mixed operations and large numbers | 25% (3.75%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
		Add and subtract numbers mentally, using Reordering (Ch3,4,7) | 33.33% (2.08%) Add and subtract numbers mentally, using Bridging through 10 (Ch3,4,7) | 33.33% (2.08%)	-a two-digit number and ones -a two-digit number and tens -two two-digit numbers -adding three one-digit numbers	- a three-digit number and tens - a three-digit number and hundreds	decimals to one decimal place	Can add and subtract increasing large numbers using a variety of strategies | 50% (2.5%) Doubling, Partitioning, Reordering, Bridging through a multiple of 10 | 50% (2.5%)	Perform mental calculations, including with mixed operations and large numbers | 100% (3.75%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Multiplication and Division							
Multiplication and Division Facts		Count in steps of 10 | 8.33% (0.83%) Count in steps of 2 | 8.33% (0.83%) Count in steps of 5 | 8.33% (0.83%)	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers | 33.33% (5%) Use concrete objects to show understanding of multiplication (Ch3) | 20% (1%) Recall the 10x table in a random order (Ch3) | 20% (1%)	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables | 33.34% (6.67%) Recall the 3x table (Ch3 and TT) | 16.67% (1.11%) Recall the 4x table (Ch3 and TT) | 16.67% (1.11%) Recall the 8x table (Ch3 and TT) | 16.67% (1.11%) Double numbers to 100 (Own) | 16.67% (1.11%)	Recall multiplication and division facts for multiplication tables up to 12 × 12 | 16.67% (3.33%) Recall the 3x 4x 8x table from year 3 (TT) | 14.29% (0.48%) Recall the 6x table (TT) | 14.29% (0.48%) Recall the 7x table (TT) | 14.29% (0.48%) Recall the 9x table (TT) | 14.29% (0.48%)	Quickly recall multiplication and division facts to 12 x 12 | 33.33% (0.67%)	

			Recall the 2x table in a random order (Ch3) | 20% (1%) Recall the 5x table in a random order (Ch3) | 20% (1%) Recognise odd and even numbers (Ch4) | 20% (1%)	Halve numbers to 100 (Own) | 16.67% (1.11%) Derive related division facts (Ch3) | 16.67% (1.11%)	Recall the 11x table (TT) | 14.29% (0.48%) Recall the 12x table (TT) | 14.29% (0.48%) Derive related division facts and understand that division cannot be done in any order (Ch3) | 14.29% (0.48%)		
Multiplication and Division		Solve one-step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher | 100% (10%) Use concrete objects to double numbers to 10 (Ch12) | 8.33% (0.83%) Use concrete objects to half numbers to 20 (Own) | 8.33% (0.83%)	Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot | 33.33% (5%) Use an array to record 2 multiplication sentences and to explain the commutative law, e.g. why 2 x 5 is the same as 5 x 2? (Ch3 and Ch4) | 33.34% (1.67%) Use an array to record the 2 division sentences that can be made from the image	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods | 33.33% (6.67%) Use multiplication facts to solve TU x U using partitioning (Ch4) | 33.33% (2.22%) Use multiplication facts to solve TU x U using a formal written method	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers | 16.67% (3.33%) Understand how a multiplication fact can be used to multiply by a multiple of 10 (Ch3) | 20% (0.67%) Understand how a multiplication fact can be used to multiply by a multiple of 100 (Ch3) | 20% (0.67%)	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers | 5% (1%) Identify common factors in two 2 digit numbers | 33.33% (0.33%) Identify multiples of a number | 33.33% (0.33%) Systematically find all factor pairs of a 2 digit number | 33.33% (0.33%) Know and use the vocabulary of prime numbers, prime	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication | 20% (4%) Use mental strategies to approximate answers to multiplication and division calculations | 50% (2%) Use an appropriate formal written method to multiply numbers up to ThHTU by TU | 50% (2%) Divide numbers up to 4 digits by a two-

		Find a total when counting in groups of 10 (Ch12) | 8.33% (0.83%) Find a total when counting in groups of 2 (Ch12) | 8.33% (0.83%) Find a total when counting in groups of 5 (Ch12) | 8.33% (0.83%) Use an array to represent a multiplication fact (Ch12) | 8.33% (0.83%) Share objects equally into groups of 2, 5 or 10 (Ch13) | 8.33% (0.83%)	(Ch2 and Ch4) | 33.33% (1.67%) Use an array to record the two addition sentences that can be made (Ch3 and Ch4) | 33.33% (1.67%)	(Ch4) | 33.33% (2.22%) Begin to use a formal written method to divide TU by U (Ch4 and own) | 33.33% (2.22%)	Understand how to multiply 3 one digit numbers together (Ch3) | 20% (0.67%) Understand the effect of multiplying by 1 and 0 (Ch3) | 20% (0.67%) Understand the effect of dividing by 1 (Ch3) | 20% (0.67%) Recognise and use factor pairs and commutativity in mental calculations | 16.67% (3.33%) Identify factors of a 2 digit number (Own) | 100% (3.33%) Multiply two-digit and three-digit numbers by a one-digit number using formal written layout | 16.67% (3.33%) Use a formal written method to multiply TU by U (Ch4) | 50% (1.67%) Use a formal written method to multiply HTU by U (Ch4) | 50% (1.67%)	factors and composite (non-prime) numbers | 5% (1%) Understand the definition of prime number | 33.34% (0.33%) Break a number down into prime factors | 33.33% (0.33%) Understand the definition of a composite number | 33.33% (0.33%) Establish whether a number up to 100 is prime and recall prime numbers up to 19 | 5% (1%) Identify prime numbers to 100 | 50% (0.5%) Recall prime numbers to 19 | 50% (0.5%) Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for	digit whole number using the formal written method of long division, interpreting remainders as whole number remainders, fractions, or by rounding, as appropriate for the context | 20% (4%) Use a standard written method of long division to divide ThHTU by TU | 50% (2%) Interpret remainders accurately | 50% (2%) Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context | 20% (4%) Use a standard written method of short division to divide ThHTU by U | 25% (1%) Use a standard written method of

| | | | | | Divide 2 and 3 digit numbers by a one digit \| 16.67% (3.33%)

Divide a two digit number be a one digit using a formal written method (Ch4) \| 50% (1.67%)

Divide a three digit number by a one digit using a formal written method (Ch4) \| 50% (1.67%) | two-digit numbers \| 15% (3%)

Use a formal written method to multiply ThHTU by U \| 25% (0.75%)

Use a formal written method to multiply TU by TU \| 25% (0.75%)

Use a formal written method to multiply HTU by TU \| 25% (0.75%)

Use a formal written method to multiply ThHTU by TU \| 25% (0.75%)
Multiply and divide numbers mentally, drawing upon known facts \| 10% (2%)

Multiply multiples of 10 by multiples of 10 \| 33.33% (0.67%)

Multiply multiples of 10 by multiples of 100 \| 33.33% (0.67%)

Divide numbers up to 4 digits by a one-digit number using the formal written method of short | short division to divide ThHTU by TU \| 25% (1%)

Interpret remainders accurately \| 25% (1%)

Identify the calculations needed to solve a short division word problem involving more than one step \| 25% (1%)

Perform mental calculations, including with mixed operations and large numbers \| 20% (4%)

Decide when to use a mental method, informal jottings or a written method for calculations with all four operations \| 33.33% (1.33%)

Derive facts involving decimals \| 33.33% (1.33%)

Use knowledge of square numbers to derive square of multiples of 10, e.g. 60 x 60 \| 33.33% (1.33%) |

division and interpret remainders appropriately for the context | 10% (2%)

Use a formal written method to divide TU by U | 25% (0.5%)

Use a formal written method to divide HTU by U | 25% (0.5%)

Use a formal written method to divide ThHTU by U | 25% (0.5%)

Understand the meaning of a remainder in a context and interpret appropriately | 25% (0.5%)

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 | 10% (2%)

Understand the effect of multiplying by 10, 100 and 1000 | 50% (1%)

Understand the effect of dividing by 10,

Identify common factors, common multiples and prime numbers | 20% (4%)

Identify common factors of 2 digit numbers | 33.34% (1.33%)

Identify common multiples of 2 digit numbers | 33.33% (1.33%)

Identify prime numbers to 100 and begin to recall these | 33.33% (1.33%)

						100 and 1000 | 50% (1%) Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) | 10% (2%) Understand how to square a number and the notation for squared | 25% (0.5%) Recognise square numbers | 25% (0.5%) Understand how to cube a number and the notation for cubed | 25% (0.5%) Recognise cube numbers | 25% (0.5%)	
Solving Problems		Solve word problems involving multiplication (Ch12) | 8.33% (0.83%) Solve word problems involving division (Ch12) | 8.33% (0.83%)	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in	Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are	Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes | 10% (2%)	Solve problems involving all of the above.

			contexts | 33.33% (5%) Use materials, arrays, repeated addition, mental methods, and multiplication and division facts to solve sharing word problems in context (Ch4) | 50% (2.5%) Use materials, arrays, repeated addition, mental methods, and multiplication and division facts to solve grouping word problems in context (Ch4) | 50% (2.5%)	connected to m objects | 33.33% (6.67%) Solve missing box calculations relating to recall of multiplication and division facts (Ch3 and Ch4) | 33.33% (2.22%) Solve correspondence problems such as 3 tops, 4 football shorts, how many different outfits can be made? (Ch3) | 33.33% (2.22%) Solve division problems, e.g. 12 sweets between 3 children or 4 cakes between 8 children (Ch4) | 33.33% (2.22%)	objects are connected to m objects | 16.67% (3.33%) Solve word problems involving multiplication (Ch3 and4) | 25% (0.83%) Solve word problems involving division (Ch3 and4) | 25% (0.83%) Solve scaling problems involving measures (Ch3 and4) | 25% (0.83%) Solve correspondence problems, e.g. there are 3 starters, mains and desserts on a menu. How many possible meals could you have? (Ch3 and4) | 25% (0.83%)	Solve problems that link children's understanding of prime numbers, composite numbers, factors and multiples, e.g. complete a partial multiplication pyramid using knowledge of factors and multiples | 50% (1%) Solve multiplication and division problems linked to measurement using children's knowledge of squared and cubed numbers | 50% (1%) Solve problems involving addition, subtraction, multiplication, division and a combination of these, including understanding the meaning of the equals sign | 10% (2%) Solve multiplication word problems | 33.33% (0.67%) Solve division word problems | 33.33% (0.67%)	

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
						Recognise the equals sign as a balancing symbol e.g. 3 x 8 = 5 + ?	33.34% (0.67%) Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple ratio	10% (2%) Solve problems that involve scaling	50% (1%) Solve simple ratio problems	50% (1%)	
Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Fractions Decimals and Percentages							
Fractions		Recognise, find and name a half as one of two equal parts of an object, shape or quantity	50% (5%) Understand fraction as equal parts of a whole (Ch14)	33.34% (1.67%)	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity	33.34% (3.33%) Find fractions of quantities with	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	16.67% (3.33%) Understand the numerator and	Recognise and show, using diagrams, families of common equivalent fractions	10% (2%) Can use common multiples to generate equivalent fractions (Ch6)	50% (1%)	Compare and order fractions whose denominators are all multiples of the same number	10% (2%) Can convert fractions using multiples to have the same denominator	50% (1%)	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	9.09% (1.82%) Use knowledge of equivalent fractions

		Understand that to half a shape or object you need two equal parts (Ch14) | 33.33% (1.67%) Understand one half as one of two equal parts of a whole (Ch14) | 33.33% (1.67%) Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | 50% (5%) Understand quarter of a shape or objects is four equal parts (Ch14) | 50% (2.5%) Understand one quarter as one of four equal parts of a whole (Ch14) | 50% (2.5%)	resources (Ch13) | 100% (3.33%) Write simple fractions for example, 1/2 of 6 = 3 | 33.33% (3.33%) Know to calculate a fraction you divide the object/quantity by the denominator and multiply by the numerator (Ch13) | 100% (3.33%) Recognise the equivalence of 2/4 and 1/2 | 33.33% (3.33%) Know 1/2 is equivalent to 2/4 Ch13) | 50% (1.67%) Find and write simple fractions of lengths and objects (Ch13) | 50% (1.67%)	denominator in a proper fraction (Ch11) | 25% (0.83%) Can calculate unit fractions by dividing (Ch11) | 25% (0.83%) Can compare unit fractions on a number line (Ch11) | 25% (0.83%) Find a fraction of a number (Ch11) | 25% (0.83%) Recognise and show, using diagrams, equivalent fractions with small denominators | 16.67% (3.33%) Recognise that one whole is equivalent to two halves, three thirds, four quarters (Ch11) | 25% (0.83%) Can work out equivalent fractions using diagrams and fraction walls (Ch11) | 25% (0.83%) Can explore patterns within equivalent	Can simplify fractions using common factors (Ch6) | 50% (1%) Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number | 15% (3%) Can use unit fractions to solve a problem (Ch6) | 50% (1.5%) Can use non-unit fractions to solve a problem (Ch6) | 50% (1.5%) Add and subtract fractions with the same denominator | 10% (2%) Add multiples of common fractions such as a 1/2 and 1/4 (Ch6) | 33.34% (0.67%) Add and subtract fractions with a common	Compare and order mixed and improper fractions | 50% (1%) Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths | 10% (2%) Identify, name and write equivalent fractions | 100% (2%) Recognise mixed numbers and improper fractions and convert from one form to the other. Write mathematical statements > 1 as a mixed number | 10% (2%) Understands that when the numerator is more than the denominator it is more than one whole | 50% (1%) Understands fractions can be represented as a mixed number and	to add fractions | 50% (0.91%) Convert mixed numbers into improper fractions | 50% (0.91%) Associate a fraction with division and calculate decimal fraction equivalents | 9.09% (1.82%) Can recall common fraction and decimal equivalents | 50% (0.91%) Can explore recurring equivalence of decimals and fractions | 50% (0.91%) Compare and order fractions, including fractions > 1 | 9.09% (1.82%) Can convert fractions into common denominators | 50% (0.91%) Can use decimal equivalence to order and compare fractions | 50% (0.91%)

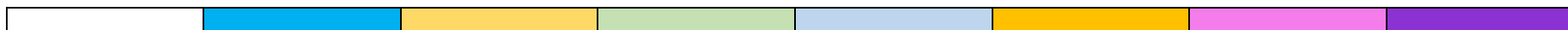|							
				fractions (Ch11) | 25% (0.83%) Can explain the link between multiplication and equivalent fractions (Ch11) | 25% (0.83%) Add and subtract fractions with the same denominator within one whole | 16.67% (3.33%) Identify fractions that will total 1 (Ch11) | 50% (1.67%) Can add fractions with the same denominator up to 1 (Ch11) | 50% (1.67%) Compare and order unit fractions, and fractions with the same denominators | 16.66% (3.33%) Compare and order fractions with the same denominator (Ch11) | 100% (3.33%) Solve fraction word problems | 16.66% (3.33%)	denominator (Ch6) | 33.33% (0.67%) Use equivalent fractions to add and subtract fractions of the same denominator | 33.33% (0.67%)	an improper fraction | 50% (1%) Add and subtract fractions with the same denominator and denominators that are multiples of the same number | 10% (2%) Can add and subtract fractions with the same denominator | 33.33% (0.67%) Can add and subtract fractions with denominators that are multiples of the same number | 33.33% (0.67%) Convert answers using mixed and improper fractions | 33.33% (0.67%) Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | 10% (2%) Can multiply together fractions with common	Divide proper fractions by whole numbers | 9.09% (1.82%) Can divide a proper fraction by a whole number | 50% (0.91%) Can explain how to divide a proper fraction, using diagrams if necessary to show understanding | 50% (0.91%) Multiply simple pairs of proper fractions, writing the answer in its simplest form | 9.09% (1.82%) Understand when multiplying by a fraction the answer will be smaller | 50% (0.91%) Can follow a standard method to multiply fractions | 50% (0.91%) Use common factors to simplify fractions; use common multiples to express fractions in the same

				Solve fraction word problems (Ch11) | 100% (3.33%)		denominators | 100% (2%)	denomination | 9.09% (1.82%) Understand equivalent fractions have common multiples | 50% (0.91%) Can simplify fractions by dividing the numerator and denominator by a common factor | 50% (0.91%)
Decimals				Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 | 16.67% (3.33%) Understand tenths are dividing an object or a number into ten equal parts (Ch11) | 33.33% (1.11%) Find and place tenths on a number line (Ch11) | 33.33% (1.11%) Compare and order numbers to 1dp	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten | 10% (2%) Understand tenths are dividing an object or a number into 10 equal parts (Ch8) | 20% (0.4%) Understand hundredths are dividing an object or a number into 100 equal parts (Ch8) | 20% (0.4%)	Read and write decimal numbers as fractions | 10% (2%) Can convert decimals to fractions | 50% (1%) Can explain the value of each part of a decimal and explain the fraction equivalence | 50% (1%) Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents | 5% (1%)	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places | 9.09% (1.82%) Multiply one-digit numbers with up to two decimal places by whole numbers | 9.09% (1.82%) Can use an appropriate formal written method to multiply numbers up to U.th by U | 33.34% (0.61%)

				(Own) | 33.33% (1.11%)	Find and place hundredths on a number line (Ch8) | 20% (0.4%) Use hundredths in money and measure (Ch8) | 20% (0.4%) Compare and order numbers to 2dp (Ch8) | 20% (0.4%) Recognise and write decimal equivalents of any number of tenths or hundredths | 10% (2%) Identify and calculate 1/10 as a decimal (Ch8) | 50% (1%) Identify and calculate 1/100 as a decimal (Ch8) | 50% (1%) Recognise and write decimal equivalents to 1/4, 1/2 and 3/4 | 5% (1%) Can recall decimal equivalent to 1/2 (Ch8) | 33.34% (0.33%) Can recall decimal equivalent to 1/4(Ch8) | 33.33% (0.33%)	Identify and calculate 1/1000 as a decimal | 33.34% (0.33%) Can identify the pattern when finding other thousandths | 33.33% (0.33%) Compare thousandths to tenths and hundredths | 33.33% (0.33%) Round decimals with two decimal places to the nearest whole number and to one decimal place | 5% (1%) Understand the rules of rounding up and down | 33.33% (0.33%) Apply the rules of rounding to a whole number | 33.33% (0.33%) Apply the rules of rounding to 1dp | 33.33% (0.33%) Read, write, order and compare numbers with up to three decimal places | 5% (1%)	Can use mental strategies to approximate answers to multiplication calculations | 33.33% (0.61%) Can say why an answer to a multiplication involving 2 decimal places cannot be correct, e.g. Sam says the answer to 2.34 x 4 is 93.6. Explain why he cannot be correct | 33.33% (0.61%) Use written division methods in cases where the answer has up to two decimal places | 9.09% (1.82%) Can use an appropriate formal method to divide a number with U.th by a single digit, e.g. in the context of money £4.35 ÷ 3 | 33.34% (0.61%) Can use an appropriate formal method to divide a whole number with a remainder by a single digit, extending their working into decimal

					Can recall decimal equivalent to 3/4(Ch8) | 33.33% (0.33%) Round decimals with one decimal place to the nearest whole number | 5% (1%) Can identify the nearest whole number to a one decimal place number (Ch8) | 100% (1%) Compare numbers with the same number of decimal places up to two decimal places | 10% (2%) Can compare and order 1 dp numbers (Ch8) | 50% (1%) Can compare 2dp numbers (Ch8) | 50% (1%) Solve simple measure and money problems involving fractions and decimals to two decimal places | 15% (3%)	Order numbers to 3dp | 100% (1%) Solve problems involving numbers up to three decimal places | 5% (1%) Solve problems with numbers involving up to three decimal places | 100% (1%)	places, e.g. £178 ÷ 8 | 33.33% (0.61%) Can interpret decimal answers in context, e.g. what does 5.6 represent if it is in the context of money? Mass? Length? | 33.33% (0.61%) Solve problems which require answers to be rounded to specified degrees of accuracy | 9.09% (1.82%) Can choose and use appropriate methods of calculation using all four operations | 50% (0.91%) Can decide whether to round an answer to the nearest tenth, whole number or higher value place, in context, e.g. approximately how many metres of fabric should I buy if I need to make 3 dresses which each use 1.34m? | 50% (0.91%)

					Knows how many 10ps are in a £1 (Ch8) | 20% (0.6%) Knows how many 1ps are in a £1 (Ch8) | 20% (0.6%) Knows how many cm are in a metre (Ch8) | 20% (0.6%) Can solve problems involving money to 2dp (Ch8) | 20% (0.6%) Can solve problems involving length to 2dp (Ch8) | 20% (0.6%)		
Percentages						Recognise the percent symbol (%) and understand that per cent relates to 'number of parts per hundred'. Write percentages as a fraction with denominator 100 and as a decimal | 10% (2%) Can write the decimal equivalent to 1% | 25% (0.5%)	Recall and use equivalences between simple fractions, decimals and percentages | 9.09% (1.82%) Can recognise simple fraction, decimal and percentage equivalences in context including ½ = 0.5, ¼ = 0.25, ¾ = 0.75, 1/10 = 0.1, 1/5 = 0.2 | 33.34% (0.61%)

| | | | | | | Understand percentage as a number out of 100 \| 25% (0.5%)

Can write percentages as a fraction with denominator 100 \| 25% (0.5%)

Can use 1% to calculate 10%, 5%, 50% and 100% \| 25% (0.5%)

Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5 and 4/5 and those fractions with a Denominator of a multiple of 10 or 25 \| 10% (2%)

Has a good recall of the percentage, fraction and decimal equivalence of 1/2, 1/4, 1/5, 2/5 and 4/5 \| 50% (1%)

Has a good recall of the percentage and decimal equivalence of fractions with a denominator of a multiple of 10 or 25 \| 50% (1%) | Can recognise other equivalent fractions, decimals and percentages with the same denominator, e.g. if 1/10 = 0.1, 3/10 = ? \| 33.33% (0.61%)

Can explain why 6/10 is more than 50% \| 33.33% (0.61%) |

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
			Measures				
Length	Compare length, weight and capacity.	Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] | 11.11% (1.67%) Can use non-standard measures to measure lengths and heights (Own) | 50% (0.83%) Can estimate and measure whether an object is longer or shorter than a class ruler (Own) | 50% (0.83%) Can use standard units to measure and compare length and height (cm) (Ch9) | 25% (0.42%)	Can measure and record accurately in centimetres and metres using rulers and metre sticks (Ch5) | 16.67% (0.42%) Can make sensible estimations in relation to all areas of measure | 16.67% (0.42%) Can decide the correct unit of measure, and tool, to use in a given situation, e.g. what unit of measure would we use to measure the mass of an apple? | 16.67% (0.42%) Compare and order lengths, mass, volume/capacity and record the results	Can measure accurately in m/cm/mm (Ch5) | 10% (0.17%) Can convert between mm/cm/m (Ch5) | 10% (0.17%) Can compare measures using the appropriate scale (Ch5,6,7) | 10% (0.17%) Solve problems involving measures (Ch5,6,7) | 10% (0.17%) Can compare and use mixed units, e.g. 1kg and 200g (Ch5,6,7) | 10% (0.17%) Solve problems linked to scaling	Can convert km into m and vice versa (Ch10) | 16.67% (0.28%) Can suggest the most appropriate unit of measure (Ch10) | 16.67% (0.28%)	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) | 20% (1%) Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling | 20% (1%) Can solve problems involving a variety of measures | 50% (0.5%)	Convert between miles and kilometres | 14.28% (1.43%) Can use the conversion of miles to km to apply to other facts | 100% (1.43%)

			using >, < and = | 16.67% (2.5%) Can compare and order different units of measure (Ch5,6,14,15) | 50% (1.25%) Can use ◊ and = to record comparisons (Ch5,6,14,15) | 50% (1.25%)	measures (Ch5,6,7) | 10% (0.17%)		Can convert appropriately between measures to help solve the problem | 50% (0.5%)	
Mass		Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than] | 11.11% (1.67%) Can compare mass of objects by holding them and using non-standard units (Ch19) | 33.33% (0.56%) Can use balance scales to compare the mass of objects (Ch19) | 33.33% (0.56%) Can estimate and measure whether an	Can measure and record accurately in grams and kilograms using measuring scales (Ch6) | 16.67% (0.42%)	Can measure accurately in kg/g (Ch6) | 10% (0.17%) Can convert between kg/g (Ch6) | 10% (0.17%)	Can convert g into kg and vice versa (Ch10) | 16.67% (0.28%)	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) | 20% (1%) Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling | 20% (1%)	

		object weighs more or less than a kilogram (Ch19) | 33.33% (0.56%) Can use standard units to measure and compare mass/weight (kg) (Ch19) | 25% (0.42%)				Can solve problems involving a variety of measures | 50% (0.5%) Can convert appropriately between measures to help solve the problem | 50% (0.5%)	
Capacity/Volume		Compare, describe and solve practical problems for capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] | 11.11% (1.67%) Can use non-standard measures to measure capacity (Ch18) | 33.33% (0.56%) Can compare the capacity of different measuring vessels (Ch18) | 33.33% (0.56%) Can estimate and measure whether a container containers more or less than a litre jug (Own) | 33.33% (0.56%)	Can measure and record accurately in millilitres and litres using measuring vessels (Ch15) | 16.67% (0.42%)	Can measure accurately in l/ml (Ch7) | 10% (0.17%) Can convert between l/ml (Ch7) | 10% (0.17%)	Can convert l into ml and vice versa (Ch10) | 16.67% (0.28%)	Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] | 20% (1%) Can find volumes of regular and irregular 3D shapes using cubes | 33.34% (0.33%) Can identify shapes/containers with a similar volume | 33.33% (0.33%) Can record volume using cm3 | 33.33% (0.33%)	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), extending to other units [for example, mm3 and km3] | 14.28% (1.43%) Can compare and order the volume of different shapes using estimates | 50% (0.71%) Can calculate the volume of a shape using the formula | 50% (0.71%)

Area and Perimeter							
		Can use standard units to measure and compare capacity and volume (l) (Ch18) | 25% (0.42%)					
Area and Perimeter				Measure the perimeter of simple 2D shapes | 16.67% (1.67%) Can measure the sides of regular polygons in centimetres and find their perimeters in centimetres (Ch14) | 100% (1.67%)	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres | 16.67% (1.67%) Can measure lines of a rectangle to calculate the perimeter (Own) | 25% (0.42%) Can generalise about the perimeter of a rectangle using words and symbols (Own) | 25% (0.42%) Can use the formulae 2(L + W) to calculate perimeter (Own) | 25% (0.42%) Can work out the perimeter of irregular shapes (Own) | 25% (0.42%)	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres | 20% (1%) Calculate the perimeter of composite rectangular shapes | 33.33% (0.33%) Can find missing lengths of composite shapes to calculate perimeter | 33.33% (0.33%) Can find missing lengths of a shape if given a perimeter | 33.33% (0.33%) Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square	Recognise that shapes with the same areas can have different perimeters and vice versa | 14.28% (1.43%) Can measure and calculate the perimeter and area of composite rectilinear shapes | 33.34% (0.48%) Can calculate the perimeters of compound shapes that can be split into rectangles | 33.33% (0.48%) Can identify shapes that have the same area but have different perimeters | 33.33% (0.48%) Recognise when it is possible to use formulae for area and volume of shapes | 14.28% (1.43%)

					Find the area of rectilinear shapes by counting squares | 16.67% (1.67%) Can relate area to arrays and multiplication (Ch11) | 50% (0.83%) Can find the area of a rectangle by counting squares (Ch11) | 50% (0.83%)	metres (m2) and estimate the area of irregular shapes | 20% (1%) Can use the formula, L x W to calculate area | 25% (0.25%) Understands why the answer is the unit squared | 25% (0.25%) Can find shapes that have a set area | 25% (0.25%) Can calculate area from scaled drawings | 25% (0.25%)	Understands when to use a formula to find the area of a shape | 50% (0.71%) Understands when to use the formula to find the volume of a shape | 50% (0.71%) Calculate the area of parallelograms and triangles | 14.28% (1.43%) Can calculate the area of right angled triangles using their knowledge of a square or rectangle | 33.34% (0.48%) Can generalise how to find the area of a triangle | 33.33% (0.48%) Can calculate the area of a parallelogram using their knowledge of squares, rectangles and triangles | 33.33% (0.48%)
Temperature			Can measure accurately in degrees Celsius (Ch7) | 16.67% (0.42%)	Estimate and measure temperature to the nearest degree.	Order temperatures.	Order temperatures including those below zero.	Calculate differences in temperatures.

Money							
		Recognise and know the value of different denominations of coins and notes | 11.11% (1.67%) Can identify coins by sorting them (Ch17) | 14.29% (0.24%) Can recognise the value of each coin and that some coins have a greater value than others (Ch17) | 14.28% (0.24%) Can recognise the value of each note and that some notes have a greater value than others(Ch17) | 14.28% (0.24%) Can add up small amounts of money and say how much altogether (Own) | 14.29% (0.24%) Can pay for items of a small value e.g. 3p, 5p, 7p, 9p using coins (Own) | 14.28% (0.24%) Can give change using 1p coins (Own) | 14.29% (0.24%)	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value | 16.67% (2.5%) Can add together different coins and find the total (Ch10) | 50% (1.25%) Can find coins that make a particular amount, e.g. which coins could you use to make 20p? (Ch10) | 50% (1.25%) Find different combinations of coins that equal the same amounts of money | 16.67% (2.5%) Use different coins to make the same amount (Framework) | 100% (2.5%) Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change | 16.67% (2.5%)	Add and subtract amounts of money to give change, using both £ and p in practical contexts | 16.67% (1.67%) Understand tenths in relation to money (Ch8) | 25% (0.42%) Can add and subtract amounts of money (Ch8) | 25% (0.42%) Can add and subtract mixed units (Ch8) | 25% (0.42%) Can give change (Ch8) | 25% (0.42%)			

		Can answer questions such as: Michael had £5. He spent £3. How much did he have left? Rosie had a 10p coin. She spent 3p. How much change did she get? (Own) | 14.29% (0.24%)	Can solve subtraction problems such as: Jess has saved 62p. She spends 15p. How much does she have left? (Ch10) | 100% (2.5%)			
Time		Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] | 11.11% (1.67%) Can estimate whether an activity lasts longer/less than a minute/hour (Own) | 50% (0.83%) Can use language of quicker, slower, earlier and later (Ongoing) | 50% (0.83%) Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] | 11.11% (1.67%)	Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times | 16.67% (2.5%) Can tell the time to quarter past the hour (Ch14) | 33.34% (0.83%) Can tell the time to quarter to the hour (Ch14) | 33.33% (0.83%) Can tell the time to the 5 minutes (Framework and Ch14) | 33.33% (0.83%)	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks | 16.67% (1.67%) Can read times in analogue format to the minute (Ch9) | 50% (0.83%) Can read times in digital format to the minute (Ch9) | 50% (0.83%) Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon,	Can convert an hour into minutes and vice versa (Ch7) | 16.67% (0.28%) Read, write and convert time between analogue and digital 12 and 24 hour clocks | 16.67% (1.67%) Can read and understand 24 hour time (Ch7) | 33.34% (0.56%) Can relate 24 hour notation to am and pm (Ch7) | 33.33% (0.56%) Can covert 12 hour into 24 hour and vice versa (Ch7) | 33.33% (0.56%) Solve problems involving converting from hours to	Complete, read and interpret information in tables, including timetables | 50% (2.5%) Answer questions that involve timetables, e.g. how long does the journey from Chester to Northwich take on the bus? | 100% (2.5%)	

		Can use language before, after, next, first, in relation to time passing and sequencing of events in familiar stories or day-to-day routines (Ch16) | 100% (1.67%) Recognise and use language relating to dates, including days of the week, weeks, months and years | 11.11% (1.67%) Can learn the order of the days of the week and learn that weekend days are Saturday and Sunday (Ongoing) | 50% (0.83%) Can name and order the months of the year (Ongoing) | 50% (0.83%) Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times | 11.12% (1.67%)		noon and midnight | 16.67% (1.67%) Can solve problems involving time (Ch9) | 100% (1.67%) Know the number of seconds in a minute and the number of days in each month, year and leap year | 16.67% (1.67%) Can say how many seconds there are in a minute (Ch9) | 33.34% (0.56%) Can say how many days there are in a month (Ch9) | 33.33% (0.56%) Can say how many days there are in a year (including leap years) (Ch9) | 33.33% (0.56%)	minutes; minutes to seconds; years to months; weeks to days | 16.67% (1.67%) Can solve problems involving time conversions (Ch7) | 100% (1.67%)		

		Can tell time to the hour (Ch16) | 20% (0.33%) Can draw hands on the clock for times to the hour (Ch16) | 20% (0.33%) Can tell time to half past the hour (Ch16) | 20% (0.33%) Can draw hands on the clock for times for half hour (Ch16) | 20% (0.33%) Can recognise times to the hour and half hour in day to day routines (Ch16) | 20% (0.33%)					
Solving Problems		Solve practical problems for: - lengths and heights - mass/weight - capacity and volume - time	Solve simple problems in a practical context involving addition and subtraction of money and measures (including time)	Solve problems involving money and measures and simple problems involving passage of time	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures	Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation including scaling Solve problems involving converting between units of time	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate | 14.3% (1.43%) Can recall approximate conversions and is able to tell if an

answer is sensible | 50% (0.72%)

Can use decimal notation in a variety of formats to solve a problem | 50% (0.72%)

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 | 14.3% (1.43%)

Can explain the relationship between conversions | 50% (0.72%)

Can make estimates based on approximate conversions. 1 litre is approximately 2 pints (more accurately, 13/4 pints). 4.5 litres is approximately 1 gallon or 8 pints. 1 kilogram is approximately 2lb

	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
							(more accurately, 2.2lb). 30 grams is approximately 1 oz. 8 | 50% (0.72%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Properties of Shape	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	Recognise and name common 2D shapes [for example, rectangles (including squares), circles and triangles] | 50% (5%) Recognise 2D shapes in a variety of orientations - rectangles (including squares), circles, triangles (Ch8) | 33.33% (1.67%) Describe 2D shapes according to their properties (sides and corners) (Ch8) | 33.33% (1.67%) Continue shape patterns (Ch8) | 33.33% (1.67%)	Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line | 25% (2.5%) Identify the number of sides in a range of 2D shapes, including quadrilaterals and polygons Ch11) | 50% (1.25%) Identify vertical lines of symmetry in 2D shapes (Ch11) | 50% (1.25%) Identify and describe the properties of 3D shapes, including the number of edges,	Draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them | 25% (1.25%) Describe the properties of 2D shapes, including semi-circles, using accurate language about lengths of lines and numbers of vertices (Ch13) | 16.67% (0.21%) Recognise shapes with equal side lengths (Ch13) | 16.67% (0.21%)	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes | 25% (1.25%) Know that and recognise that an equilateral triangle has three equal sides and three equal angles (Ch12) | 9.09% (0.11%) Know that and recognise that isosceles triangles have two equal sides and two equal angles (Ch12) | 9.09% (0.11%)	Identify 3D shapes, including cubes and other cuboids, from 2D representations | 16.67% (0.83%) Name 3D shapes from pictures | 33.34% (0.28%) Identify the 3D shapes represented by 2D nets | 33.33% (0.28%) Identify nets of a cube | 33.33% (0.28%) Use the properties of rectangles to deduce related facts and find missing lengths and angles | 16.67% (0.83%)	Draw 2D shapes using given dimensions and angles | 20% (1%) Identify, visualise and describe properties of rectangles, triangles and regular polygons | 16.67% (0.17%) Use a ruler to measure accurately within 1mm | 16.67% (0.17%) Use a ruler to draw lines accurately within 2mm | 16.67% (0.17%) Use a protractor to measure angles accurately within 1

		Recognise and name common 3D shapes [for example, cuboids (including cubes), pyramids and spheres] | 50% (5%) Recognise 3D shapes in a variety of orientations - cylinder, triangular prism, cone, cube, cuboid, pyramids and spheres (Ch8) | 100% (5%)	vertices and faces | 25% (2.5%) Recognise and name 3D shapes, including cuboids, prisms and cones (Ch12) | 50% (1.25%) Describe the properties of 3D shapes, including number of faces, edges and vertices (Ch12) | 50% (1.25%) Identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] | 25% (2.5%) Identify 2D shapes on the surface of a 3D shape, including: A triangle on a pyramid, A square on a cube, A rectangle on a cuboid, A circle on a cylinder and cone, A triangle and rectangle on a triangular prism (Ch12) | 100% (2.5%)	Recognise lines of symmetry in 2D shapes (Ch13) | 16.67% (0.21%) Use Venn and Carroll diagrams to classify 2D shapes (Own) | 16.67% (0.21%) Describe the properties of 3D shapes, including hemispheres and prisms, using language such as base, face, vertex and edge (Ch13) | 16.67% (0.21%) Recognise and name 3D shapes viewed from different angles (Ch13) | 16.67% (0.21%)	Know that and recognise that right angled triangles have one right angle (Ch12) | 9.09% (0.11%) Know that and recognise that scalene triangles have no equal sides and no equal angles (Ch12) | 9.09% (0.11%) Know that and recognise that squares have four equal sides and four right angles (Ch12) | 9.09% (0.11%) Know that and recognise that rectangles have two pairs of equal and parallel sides and four right angles (Ch12) | 9.09% (0.11%) Know that and recognise that parallelograms have two pairs of equal and parallel sides (Ch12) | 9.09% (0.11%) Know that and recognise that	Know that a rectangle has two pairs of equal and parallel sides | 16.67% (0.14%) Know that a rectangle has four right-angles | 16.67% (0.14%) Explain why a square is a type of rectangle | 16.67% (0.14%) Find missing lengths of rectangles | 16.67% (0.14%) Identify the diagonals of rectangles | 16.67% (0.14%) Make suggestions about the size of angles formed between the parallel sides of a rectangle and its diagonals | 16.67% (0.14%) Distinguish between regular and irregular polygons based on reasoning about equal sides and angles | 16.66% (0.83%)	degree | 16.67% (0.17%) Use a protractor to draw angles accurately within 2 degrees | 16.67% (0.17%) Construct a triangle given two sides and the included angle | 16.67% (0.17%) Recognise, describe and build simple 3D shapes, including making nets | 20% (1%) Identify, visualise and describe properties of 3D solids | 33.34% (0.33%) Identify 3D shapes from their nets and explain why, including open and closed cubes | 33.33% (0.33%) Draw nets of 3D shapes with given dimensions | 33.33% (0.33%) Compare and classify geometric shapes based on their properties and sizes.

			Compare and sort common 2D and 3D shapes and everyday objects | 25% (2.5%) Sort and classify 2D and 3D shapes and everyday objects using a Venn diagram, according to their properties (Own and Ch11 and Ch12) | 50% (1.25%) Can sort and classify 2D and 3D shapes and everyday objects using a Carroll diagram (Own and Ch11 and Ch12) | 50% (1.25%)		rhombuses have four equal sides, two pairs of parallel sides (Ch12) | 9.09% (0.11%) Know that and recognise that trapeziums have: - one pair of parallel sides (Ch12) | 9.09% (0.11%) Know that and recognise that kites have two pairs of equal sides which are parallel, two equal angles (Ch12) | 9.09% (0.11%) To know the names of other polygons and their associated numbers of sides (Ch12) | 9.09% (0.11%) Identify lines of symmetry in 2D shapes presented in different orientations | 25% (1.25%) Know that and recognise that a square has four lines of symmetry (Ch12) | 11.11% (0.14%)	Recognise that a regular polygon has n equal sides and n equal angles | 25% (0.21%) Identify regular and irregular polygons from a set of shapes and explain why | 25% (0.21%) Identify a square as the only regular quadrilateral | 25% (0.21%) Sort shapes based on their properties, using Venn and Carroll diagrams | 25% (0.21%)	Find unknown angles in any triangles, quadrilaterals, and regular polygons | 20% (1%) Recognise the properties of isosceles, right angled, equilateral and scalene triangles | 25% (0.25%) Recognise the properties of squares, rectangles, rhombuses, parallelograms, trapeziums and kites | 25% (0.25%) Explain why a polygon is regular or irregular | 25% (0.25%) Find unknown angles in all triangles, given one angle | 25% (0.25%) Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius | 20% (1%) Know that the circumference is the

					Know that and recognise that a rectangle has two lines of symmetry (Ch12) | 11.11% (0.14%) Know that and recognise that a rhombus has two lines of symmetry (Ch12) | 11.11% (0.14%) Know that and recognise that a parallelogram has no lines of symmetry (Ch12) | 11.11% (0.14%) Know that and recognise that a trapezium may or may not have a line of symmetry (Ch12) | 11.11% (0.14%) Know that and recognise that a kite has one line of symmetry (Ch12) | 11.11% (0.14%) Know that and recognise that an equilateral triangle has three lines of symmetry (Ch12) | 11.11% (0.14%)		distance around a circle | 25% (0.25%) Know that the radius is the distance from the centre to the circumference | 25% (0.25%) Know that the diameter is 2x the radius | 25% (0.25%) Use the formula C = pd to work out the circumference of a circle | 25% (0.25%)

Know that and recognise that an isosceles triangle has one line of symmetry (Ch12) | 11.11% (0.14%)

Know that and recognise that a regular polygon has the same of lines of symmetry as it has sides (Ch12) | 11.11% (0.14%)

Complete a simple symmetric figure with respect to a specific line of symmetry | 25% (1.25%)

Complete a pattern drawn on a square grid with one line of symmetry drawn parallel to the gridlines (Ch12) | 33.34% (0.42%)

Complete a pattern drawn on a square grid with one line of symmetry drawn at an angle to the gridlines (Ch12) | 33.33% (0.42%)

Complete a pattern drawn on a square grid with two lines of

Angles and Lines							
					symmetry | 33.33% (0.42%)		
Angles and Lines				Recognise angles as a property of shape or a description of a turn | 25% (1.25%)

Can recognise that angles are the amount of turn between two lines (Ch12) \| 50% (0.63%)

Describe properties of shapes in terms of the angles formed at vertices \| 50% (0.63%)

Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle \| 25% (1.25%)

Identify right angles as 90° (Ch12) \| 20% (0.25%)

Recognise that two right angles make a | Identify acute and obtuse angles and compare and order angles up to two right angles by size \| 25% (1.25%)

Identify acute angles on their own and within shapes (Ch12) \| 33.34% (0.42%)

Identify obtuse angles on their own and within shapes (Ch12) \| 33.33% (0.42%)

Compare two or more angles up to 180° (Ch12) \| 33.33% (0.42%) | Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles \| 16.67% (0.83%)

Can explain that angles are measured in degrees \| 25% (0.21%)

Can identify acute, obtuse and reflex angles \| 25% (0.21%)

Can estimate the size of acute, obtuse and reflex angles \| 25% (0.21%)

Can compare and order a set of angles \| 25% (0.21%)
Draw given angles, and measure them in degrees (°) \| 16.66% (0.83%)

Can use a protractor to measure angles accurately in degrees both on their own and within shapes \| 50% (0.42%) | Recognise angles where they meet at a point, are on a straight line, or are vertically opposite. Find missing angles \| 20% (1%)

Estimate angles \| 12.5% (0.13%)

Use a protractor to measure angles on their own and in shapes \| 12.5% (0.13%)

Use a protractor to draw angles on their own and in shapes \| 12.5% (0.13%)

Know that the angle sum of a triangle is 180° \| 12.5% (0.13%)

Know that the angles on a straight line add to 180° \| 12.5% (0.13%)

Know that the sum of angles around a point is 360° \| 12.5% (0.13%) |

			half turn or 180° (Ch12) | 20% (0.25%) Recognise that three right angles make a three quarter turn or 270° (Ch12) | 20% (0.25%) Recognise that four right angles make a whole turn or 360° (Ch12) | 20% (0.25%) Use the terms acute and obtuse to describe angles less or greater than a right angle (Ch12) | 20% (0.25%) Identify horizontal and vertical lines and pairs of perpendicular and parallel lines | 25% (1.25%) Identify horizontal and vertical lines (Ch12) | 33.34% (0.42%) Identify pairs of parallel lines within shapes and around them (Ch12) | 33.33% (0.42%)		Can draw given angles using a protractor | 50% (0.42%) Identify, angles at a point and one whole turn (total 360°), angles at a point on a straight line and 1/2 a turn (total 180°) and other multiples of 90° | 16.67% (0.83%) Can recognise that angles at a point make a whole turn and total 360 | 25% (0.21%) Can recognise that angles on a straight line make half a turn and total 180° | 25% (0.21%) Can recognise multiples of 90° within turns | 25% (0.21%) Can calculate missing angles in a range of contexts | 25% (0.21%)	Recognise vertically opposite angles and know that they are equal | 12.5% (0.13%) Find missing angles in a variety of contexts | 12.5% (0.13%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
				Identify pairs of perpendicular lines within shapes and around them (Ch12) | 33.33% (0.42%)			

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Position and Direction	Continue, copy and create repeating patterns. Select, rotate and manipulate shapes in order to develop spatial reasoning skills	Describe position, direction and movement, including whole, half, quarter and three-quarter turns | 100% (5%) Can distinguish between left and right (Ch20) | 25% (1.25%) Can use ordinal language, e.g. 1st, 4th (Ch20) | 25% (1.25%) Can use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside	Order and arrange combinations of mathematical objects in patterns and sequences | 50% (2.5%) Can describe patterns in sequences (Ch11 and Ch12) | 33.34% (0.83%) Can predict what comes next in a sequence (Ch11 and Ch12) | 33.33% (0.83%) Can continue a pattern (Ch11 and Ch12) | 33.33% (0.83%) Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and		Describe positions on a 2D grid as coordinates in the first quadrant | 33.34% (1.67%) Can distinguish between the x and y axis (Ch13) | 50% (0.83%) Can describe the position of a shape on an axis (Ch13) | 50% (0.83%) Describe movements between positions as translations of a given unit to the left/right and up/down | 33.33% (1.67%) Can describe position of a vertex of a 2D shape in the first quadrant using a pair of coordinates	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed | 100% (5%) Can describe the position of a shape after it has been reflected in a line that is parallel to an axis | 50% (2.5%) Can describe the position of a shape after it has been translated across and up | 50% (2.5%)	Describe positions on the full coordinate grid (all four quadrants) | 50% (2.5%) Can describe the vertices of a shape in all four quadrants | 50% (1.25%) Can use the properties of a shape to complete the vertices of the shape | 50% (1.25%) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes | 50% (2.5%) Can draw a shape after a reflection of a simple shape in two mirror lines | 50% (1.25%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
		and outside (Ch20) | 25% (1.25%) Can recognise whole, half, quarter and three quarter turns (Ch20) | 25% (1.25%)	distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) | 50% (2.5%) Can recognise whole and half turns (Own Beebots) | 33.34% (0.83%) Can recognise quarter and three quarter turns (Own Beebots) | 33.33% (0.83%) Can give instructions for a friend/robot using a right angled turns (Own Beebots) | 33.33% (0.83%)		(Ch13) | 50% (0.83%) Can translate a shape using left/right and up/down (Ch13) | 50% (0.83%) Plot specified points and draw sides to complete a given polygon | 33.33% (1.67%) Can use properties of shape to complete the vertices of a simple shape (plotting points) (Ch13) | 100% (1.67%)		Can draw a shape after a shape has been translated across the four quadrants | 50% (1.25%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Statistics							
			Interpret and construct simple pictograms, tally charts, block diagrams and simple tables | 33.33% (1.67%)	Interpret and present data using bar charts, pictograms and tables | 50% (2.5%) Interpret data from a pictogram when one symbol represents	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs | 50% (2.5%)	Solve comparison, sum and difference problems using information presented in a line graph | 50% (2.5%) Answer questions that involve	Interpret and construct pie charts and line graphs and use these to solve problems | 50% (2.5%) Use knowledge of fractions and

			Record data in everyday situations, e.g. dinner or packed lunch? (Ch8) | 50% (0.83%) Present data in different ways using a scale of 2, 5 or 10 (Ch8) | 50% (0.83%) Answer retrieval questions from the charts and graphs that they are working with | 33.33% (1.67%) Answer retrieval questions from the charts and graphs that they are working with (Ch8) | 100% (1.67%) Ask and answer questions about totalling and comparing categorical data | 33.34% (1.67%) Find the total of two categories on a pictogram, tally, block diagram and simple table (Ch8) | 50% (0.83%)	more than one unit (Ch10) | 20% (0.5%) Interpret data in graphs and understand varying scales of multiples of 2, 5 and 10 when reading values presented in bar charts (Ch10) | 20% (0.5%) Create a tally chart and understand that grouping in 5s helps with the accuracy and speed of counting the totals (Ch10) | 20% (0.5%) Transfer data from a tally chart to a table (Ch10) | 20% (0.5%) Create a bar chart to represent data (Ch10) | 20% (0.5%) Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and	Use an appropriate scale when representing data (Ch5) | 50% (1.25%) Answer questions from a range of different graphs, e.g. in which months was the temperature below 10°C? (Ch5) | 50% (1.25%) Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs | 50% (2.5%) Answer questions from a bar chart that involve comparison, sum and difference (Ch5) | 25% (0.63%) Answer questions from a pictogram that involve comparison, sum and difference (Ch5) | 25% (0.63%) Answer questions from a table that involve comparison,	comparing the values between two points on a line graph, e.g. when does the temperature rise the quickest? | 25% (0.63%) Answer questions that involve finding the difference between two points on a line graph, e.g. by how much does the temperature rise between 1 and 2pm? | 25% (0.63%) Answer questions that involve finding the sum of values on a line graph, e.g. how far did the lorry driver travel in total? | 25% (0.63%) Accurately draw a line graph based on sourced data | 25% (0.63%) Complete, read and interpret information in tables, including timetables | 50% (2.5%) Answer questions that involve timetables, e.g. how long does the journey from Chester to	percentages to interpret pie charts | 33.33% (0.83%) Construct a simple pie chart using common fractions | 33.33% (0.83%) Interpret a line graph when the answer lies between two given intervals | 33.33% (0.83%) Calculate and interpret the mean as an average | 50% (2.5%) Calculate the mean of a set of numbers | 50% (1.25%) Understand that the mean is an average and understand when it is appropriate to find the mean of a set of data | 50% (1.25%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
			Find the difference between two categories on a pictogram, tally, block diagram and simple table (Ch8) | 50% (0.83%)	pictograms and tables | 50% (2.5%) Answer questions from a bar chart that involve comparison, sum and difference (Ch10) | 33.33% (0.83%) Answer questions from a pictogram that involve comparison, sum and difference (Ch10) | 33.33% (0.83%) Answer questions from a table that involve comparison, sum and difference (Ch10) | 33.34% (0.83%)	sum and difference (Ch5) | 25% (0.63%) Answer questions from a line graph that involve comparison, sum and difference (Ch5) | 25% (0.63%)	Northwich take on the bus? | 100% (2.5%)	

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Ratio							
							Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts | 25% (1.25%) Understands ratio as a comparison of one

part or amount with another | 33.34% (0.42%)

Can confidently use the language of 'for every' when describing a ratio | 33.33% (0.42%)

Can use ratio to show the relative size of two quantities | 33.33% (0.42%)

Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples | 25% (1.25%)

Can investigate possible answers to a question where one fraction has an impact on the other | 100% (1.25%)

Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison | 25% (1.25%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
							Understands proportion as a fraction of the whole amount | 50% (0.63%) Understands proportion as a percentage of the whole amount | 50% (0.63%) Solve problems involving similar shapes where the scale factor is known or can be found | 25% (1.25%) Understands direct proportion by scaling quantities up and down | 50% (0.63%) Can scale up/down recipes for a given number | 50% (0.63%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
==Algebra==							
							Use simple formulae | 20% (1%) Understands a value can be replaced by a

number or a symbol | 25% (0.25%)

Can solve missing box calculations by using inverse | 25% (0.25%)

Can substitute values into a formulae to find an answer | 25% (0.25%)

Can show a good understanding of the equals sign | 25% (0.25%)

Generate and describe linear number sequences | 20% (1%)

Can create a number sequence given a rule to follow | 33.34% (0.33%)

Understands a linear equation can be recursive, i.e. one number in the sequence is generated from the preceding number (e.g. by adding 3 to the preceding number) | 33.33% (0.33%)

Understands a linear equation can be

ordinal, i.e. the position of the number in the sequence generates the number (e.g. by multiplying the position by 3, and then subtracting 2) | 33.33% (0.33%) Express missing number problems algebraically | 20% (1%)

Can use symbols to express missing number problems | 25% (0.25%)

Can find values that satisfy the equation and make it a true statement | 25% (0.25%)

Understands the associative law and can apply it to missing number problems | 25% (0.25%)

Understands the distributive law and can apply it to missing number problems | 25% (0.25%)

Find pairs of numbers that satisfy an

	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
							equation with two unknowns | 20% (1%) Can substitute numbers into unknowns to find a given value where there are limited answers | 100% (1%) Enumerate possibilities of combinations of two variables | 20% (1%) Can identify different variables and consider the impact on one when one changes, e.g. list all the combinations of boys and girls in a class where there are twice as many boys as girls and between 25 & 35 children in the class altogether | 100% (1%)

Area	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
			==Impact==				
	Children in Reception will	Children in Year 1 should be able to count to thirty	Children in Year 2 will be able to count to 100 and	Children in Year 3 have a secure understanding of	Children in Year 4 have a growing confidence with	Children in Year 5 are prepared for KS2 SATS through	Children in Year 6 are prepared for transition to KS3

have a deep understanding of number to 10, including the composition of each number; 14. They will know and understanding how to Subitise (recognise quantities without counting) up to 5. They will be able to automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Children will be able to verbally count beyond 20, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less	and identify number bonds to ten and twenty. They should be able to add and subtract two groups and write number sentences to show this. They should be able to use resources to show their reasoning. Children should be able to identify a range of simple 2D and 3D shapes and recall basic properties (e.g. corners, faces). They can divide objects into groups and draw simple arrays. They can identify coins and measure simple lengths, heights, capacities and volumes.	beyond, They will use place value to add and subtract a 2digit and a 2digit number beginning to show exchange and carrying. They know their 2,5, and 10 times table They can name and describe common 2d and 3d shapes. They can show mastery in the way that they use their written methods and understand word problems. They will be confident using bar models and part part whole models. They understand the fractions halves quarters and thirds. They recognize and use coins. They can tell the time to the nearest 15 minutes.	place value to 3 digit numbers, are able to use the column method confidently to add and subtract 3 numbers. They will have a secure knowledge of the 3,4 and 8 times tables and will be able to use written methods for multiplication and division.	place value, using these skills within both written and mental calculations for all four operations. Children have developed a better understanding of mathematical reasoning. Children will be prepared to sit the MTC.	their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of vocabulary.	through their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of vocabulary.

than or the same as the other quantity. Children will also be able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally