

Oral mental starters (ongoing, throughout the term):

- Count from (and back to) 0 in multiples of 3, 4, 6, 7, 8, 9, 11, 12, 25, 50, 100 and 1000
- Recall and use multiplication and division facts for the 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 times tables (up to the 12th multiple) (See Multiplication Tables Guidance, 2020)
- Find all factor pairs of a given number; find all common factors for a pair of numbers
- Multiply and divide numbers mentally using known facts and a range of strategies (See Mental calculation strategies, 2017)
- Multiply numbers with up to two decimal places by 10, 100 and 1000 and divide corresponding numbers by 10, by 100 and by 1000
- Subtract larger numbers mentally by finding the difference (small differences), e.g. 8,004 6999 = 1,005 (consider empty number lines)
- Find doubles of numbers up to five digits (using knowledge of partitioning and place value) and find corresponding halves
- Count forwards and backwards with positive and negative whole numbers, including through zero; calculate intervals across zero (in context)
- Recognise, describe and extend linear number sequences, including those involving decimals, e.g. 0.7, 1.4, 2.1; find the term to term rule
- Compare and order fractions, decimals and percentages (using diagrams and resources to support)
- Name and write equivalent fractions of a given number, including tenths and hundredths (support understanding by using materials and diagrams)
- Recognise and use square numbers (up to 12×12) and the notation e.g. $9^2 = 81$
- Find percentages of whole number quantities using known fraction equivalences e.g. 10% of £84; 20% of 80; 50% of £248
- Read and write Roman numerals to at least 1000 (M)
- Count forwards and backwards in steps of powers of 10 (10,100,1000,10,000) from any given number

Areas of Study	No of days	Statutory requirements and non-statutory guidance	Suggested Key Vocabulary
Number		Read and write numbers to at least one million ; recognise 1,000,000 as one million. Order and compare numbers within 1,000,000	Partition, Place Value Digit, number
Number and place value	3-5	Round numbers up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000 Determine the place value of each digit in a six-digit number Partition six-digit numbers into hundred thousands, ten thousands, thousands, hundreds, tens and ones/units; continue to use place value cards and charts to support, if necessary	Units/ones, tens, hundreds, thousands, ten thousands, hundred thousands,
Week 1		Use knowledge of place value to solve number problems by adding and subtracting 10, 100, 1000, 10,000 to any number up to 1,000,000 e.g. I am buying a new flat. It was for sale for £335,000 but the price has gone up by £1,000. How much does it cost now? Last year it was £10,000 cheaper. How much was it then? Reason about numbers and place value e.g. a number rounded to the nearest 10,000 is 120,000. What's the smallest number it could be? What's the largest number it could be?	one million Order Compare More than, Less than, <, > Round



Number Decimals/	2	Read and write numbers with up to three decimal places Order and compare numbers with up to three decimal places (including in the context of measures) Round decimal numbers with one or two decimal places to the nearest whole number Round decimal numbers with two decimal places to one decimal place	Partition, Place value Digit, number, decimal, tenth, hundredth, thousandths
place value &		Determine the place value of each digit in a decimal number with up to three decimal places Partition decimal numbers with up to three decimal places; use place value cards and charts to support, if necessary	Order, compare More than, greater than, less than, <, >
Addition/	3	Consolidate using the formal written method of addition to add two four-digit or five-digit numbers and decimal numbers (with up to three-decimal places), including in the context of money and measures	Round Inverse operations
Subtraction		Consolidate the formal written method of subtraction to subtract two four-digit or five-digit numbers and decimal numbers (with up to three decimal places), including in the context of money and measures (See Written Calculation Policy, 2017)	Addition Subtraction
Week 2		Solve addition and subtraction two-step and multi-step word problems (including money and measures problems, with up to 3 decimal places), deciding which operations to use; use rounding and inverse operations to estimate and check answers to calculations	round
Measurement		Convert between different metric units of length, using knowledge of place value, multiplication and division- consider as mental/oral activities	Length, height, width, distance
Length, perimeter, area and volume	5	Estimate and measure length/height/width using appropriate units and equipment, including mixed units of measurement, and record using decimal notation, in practical contexts; measure and draw lines to the nearest mm Follow a line of enquiry related to length e.g. True or false? Your height is equal to 3x the circumference of your head. How will you find out?	km, kilometre m, metre cm, centimetre mm, millimetre
		Consolidate understanding of perimete r and express the formula for finding the perimeter of a rectangle in words (and then letters); calculate the perimeter of rectilinear shapes and of composite rectilinear shapes; solve perimeter problems with missing measurements	Perimeter Area
		Consolidate understanding of area and relate finding area to arrays and to multiplication Find the area of rectangles using the formula in words (and then letters), using the notation for square centimetres (cm ²) and square metres (m ²); estimate the area of irregular shapes by counting squares	Square centimetres, cm ² , square metres, m ²
Week 3		Reason about area and perimeter e.g. draw a rectangle with an area of 36 cm ² and a perimeter of 26cm. Can you find other rectangles with the same area?	
		Understand the term volume and the units cubic centimetres (cm ³); relate to cubes and cuboids Begin to estimate and calculate the volume of cubes and cuboids using standard units of cm ³ (taken from Y6 Programmes of Study)	Volume, cuboids Cubic centimetres, cm ³



Geometry	3	Identify 3D shapes, including cubes and other cuboids, from 2D representations; describe the properties of 3D shapes using vocabulary from previous years; extend with 'pairs of parallel faces'	Relevant vocabulary from previous terms/ years
Duon antia a af		Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	including all quadrilaterals,
Shape (2D & 3D)		Identify all quadrilaterals and describe their properties, including regular/ irregular, symmetrical, pairs of parallel sides, types of angles; use conventional marking for parallel lines and right angles	polygons, regular, irregular, parallel, pairs of parallel faces/sides
		Solve problems/ reason about shapes e.g. Given the diagonals of a quadrilateral, draw the sides and identify the shape What's the same about a trapezium and a parallelogram? What's different about them? A cuboid is a prism. True or false? Convince me!	
Week 4	2	Measure given angles to the nearest degree using a protractor Know that angles on a straight line and half a turn total 180°; know that angles at a point and a whole turn total 360°; use this knowledge to find missing angles on a line and at a point	Degrees (°) Protractor
		Recognise and use square numbers up to 12 x 12 and the notation for squared number (2)	Square numbers (²)
Number	Б	Introduce cube numbers and the notation e.g. $2^3 = 2 \times 2 \times 2 = 8$; relate to volume and cm ³	Cube numbers (³)
Multiplication	5	Consolidate the formal written method of short multiplication to multiply a two-digit number, a three digit-number or a four- digit number by a single digit number (See Written Calculation Policy, 2017)	Multiply, multiplication, times, product
		Consolidate the formal written method of long multiplication to multiply a two-digit number by a two- digit number; extend with multiplication of a three digit number by a two-digit number (See Written Calculation Policy, 2017)	Thousands, hundreds, tens, ones/units, digit
		Solve word problems, which involve short and long multiplication e.g. How many hours are there in 8 weeks?	Formal method of short multiplication
Week 5		There are 245 paper clips in a box. I buy 6 boxes. How many paper clips do I have? Tom is 15 years old today. How many months has he been alive? At the cinema there are 36 seats in a row and 28 rows. How many seats are there altogether? Notebooks cost £4.75 each. I buy 28 notebooks for my class. How much do I spend?	Formal method of long multiplication



		Know and apply tests of divisibility by 2, 3, 4, 5, 9, 10, 100 -consider as mental/oral starters	Prime number, composite
Number		Consolidate understanding of prime numbers ; recall prime numbers up to 19; begin to establish	number, prime factor
Division	Б	whether a number up to 100 is prime, using knowledge of multiplication and division facts, factors and	Divide division divisor
DIVISION	5	multiples; use the vocabulary of prime numbers, prime factors and introduce the term composite	dividend quotient
			amaona, quotioni
		Use the formal method of short division to divide numbers with up to four- digits by a single digit number with whole number answers or with remainders, including expressing the remainder as a fraction (See Written Calculation Policy, 2017)	Short division
			Formal layout)
		Solve word problems, which involve short division, with and without remainders; interpret remainders	
		appropriately for the context e.g.	Round up/down, remainder
		(round down)	
Week 6		I collect 110 eggs from my hens. If I put them into boxes of six, how many boxes will I need?	
		(round up)	
		Consolidate understanding of mixed numbers and improper fractions and convert from one form to	Whole
Number		the other	Unit fraction, non-unit
Fractions	5	Find unit and non-unit fractions of whole number quantities or a 1/6 of 420: 5/6 of 72: relate to	Numerator denominator
decimals and	U	multiplication and division	
percentages		Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	Equivalent fractions, mixed
		e.g. $1/5 \times 3 = 3/5$. $2/5 \times 4 = 8/5$ (the answer can also be expressed as a mixed number).	number, improper fraction
		$1\frac{1}{4} \times 3 = 3\frac{3}{4}; 2\frac{3}{4} \times 3 = 8\frac{1}{4}$	Desimal nereentage 0/
		Solve problems and reason about fractions e.g. Would you rather have 5/6 of £42 or 4/5 of £45?	Decimal, percentage, %,
		Know desimal and percentage equivalents of $1/2$, $1/4$, $2/4$, $1/5$, $2/5$, $4/5$ and these fractions with a	equivalence
		denominator of a multiple of 10 $(1/10, 2/10, 3/10)$	
		Compare simple decimal, fraction and percentage equivalents, e.g. Which is greater 25% or 1/5? 0.8 or 3/4? How do you know? Use materials and diagrams to support	
		Find percentages of whole number quantities using known fraction equivalences e.g. 10% of $45 - 4.5$.	
		20% of $80 = 16$; $25%$ of $40 = 10$; $50%$ of £184 = £92	
Week 7		Solve word problems which involve percentages e.g. There are 80 children in the playground. 20% of them are girls. How many girls and how many boys are there?	
		Convert between 12 hour digital clocks and 24 hour digital clocks e.g. What time on the 12 hour clock	All relevant vocabularv from

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Measurement		is 19:55? What time on the 24 hour clock is 8:20 pm?	previous years relating to
	2	Convert between units of time e.g. how many seconds in five minutes? How many seconds in an	measures (including time)
Units of		hour? How many days are there in 12 weeks? How many months (and days) have you been alive?	
measurement		How many days are there in the first rout months of this year allogether? How many hours in 5 days? How many hours in a week?	
		Make estimates of measurements (length, mass and canacity) choosing suitable units of measure	Convert
	3	e.g. Approximately how tall am I? What is the capacity of my flask? How much does one tea-bag	Units of measurement Decimal notation
	Ū.	weign?	
		Convert between different units of metric measures, using decimal notation, when appropriate e.g.	
		a 2.5 jug of juice? My dog weighs 4.25 kg. How much does he weigh in grams?	
		Establish where we still see/ use imperial units being used today e.g. a pint of milk, inches on some	Matric massures imporial
Week 8		rulers, my new baby weighs 7 pounds, miles on road signs	measures
MOOK 0		Understand and use approximate equivalences between metric units and some common imperial	
		units, such as miles, feet and inches, pounds and pints	On and in a long first such days t
Coomotru		consolidate describing positions on a 2D grid as co-ordinates in the first quadrant ; plot specified points and draw sides to complete a given polygon	Co-ordinates, first quadrant,
Geometry	2	Extend by introducing the second guadrant and the use of negative numbers to plot points and to	numbers
Position and		draw sides to complete a given polygon	
Direction		Use co-ordinates to describe reflections and translations of polygons	Timetable, 12 hour/ 24 hour
_		Use information presented in timetables using 12 hour digital time and 24 hour digital time	digital time
&	З	Complete, read and interpret information in timetables	
Statistics	5	Solve problems by interpreting timetables e.g. bus or train times	
Statistics		Use information presented in line graphs (including time graphs) with a wide range of scales;	Line graphs, time graphs,
		Use information presented in bar charts with a wide range of scales: interpret bar charts including	bar charts, data
		solving sum and difference problems; understand that bar charts are used to present discrete data	
		Interpret a straight line graph showing conversion from km to miles and answer related questions	
		(taken from Y6 Programme of Study)	
Week 9		Follow a line of enquiry by collecting and presenting data; decide which representations of data are most appropriate and why	
		Find all factor pairs of a given number; find all common factors of two numbers e.g. the common	Factors, factor pair,
Number		factors of 36 and 42 are 2, 3, 4, 6 and 8	common factors

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Multiplication and division (mental methods) Week 10	5	Multiply and divide numbers mentally using a range of strategies, drawing upon known facts, knowledge of place value, inverse operations, knowledge of factors and multiples e.g. Use inverse operations, place value and the known fact $7 \times 8 = 56$ to calculate: $56 \div 8$; 70×8 ; $560 \div 70$; 0.8×7 ; 80×70 ; $560 \div 8$ Partition and use the distributive law to calculate $47 \times 5 = (40 \times 5) + (7 \times 5) = 200 + 35 = 235$ Use partitioning to calculate $98 \div 7 = (70 + 28) \div 7 = 10 + 4 = 14$ (See Mental calculation Strategies, 2017) Understand the meaning of the = sign to indicate equivalence, including missing number problems e.g. $54 \div 9 = \boxed{]} \div 7$; $8 \times \boxed{]} = 4 \times 12$ Consider the problem 'Adam's Apples' (See Mathematical challenges for all pupils, 2016)	Multiply, multiplication, product Divide, division, divisor, dividend, quotient Inverse operation Partition Equivalence, equivalent Problem, solution
Number Addition and subtraction (mental methods) & Problem solving (all operations)	5	 Add/subtract larger numbers and decimals mentally, using jottings (such as empty number lines) where necessary, for example: Use partitioning and jottings to add two numbers together e.g. 8,465 + 3,328 Find sums and differences of decimals using an empty number line e.g. 8.5 + 2.8; 17.8 – 1.4 Add 999 by adding 1,000 and adjusting; subtract 999 by subtracting 1,000 and adjusting Find a small difference between near multiples of 1,000 by counting on using an empty number line e.g. 8,006 – 6,997 (See Mental Calculation Strategies, 2017) Solve two-step or multi-step word problem involving addition, subtraction, multiplication and division; use mental methods with jottings or formal written methods; decide which operations and methods to use; use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy e.g. I moved into my house in April 1998. How many years have I lived in this house? What will the year be when I have lived there for 25 years? There are 7,546 people at the theme park. 998 more people arrive. How many are there now? What if 1,001 people leave- how many will be left in the theme park? I buy a punnet of strawberries that cost £2.99 and a tray of peaches that cost £3.99. How much do I spend? How much change do I get from a ten pound note? 	Addition, total, sum Subtraction, difference Calculate, calculation Operation, method
Week 11		I buy three trays of peaches and two punnets of strawberries. How much change will I get from £20? How many trays of peaches could I buy with £30? How much change would I get? Consider the problem 'Peter's Primes' (See Mathematical challenges for all pupils, 2016)	Weight mass measure
Measurement		A bottle of salad dressing holds 399ml. A tablespoon holds 15ml. How many tablespoons of dressing	Kilograms, kg, grams, g

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Length, Mass and Capacity (problem solving)	5	 are in the bottle? I have a piece of rope 2.5 metres long. I cut off 65 cm. How much is left? There is 2.2kg of flour in a bag. How much flour is in 10 bags? If I use 500g of flour from a bag, how much will be left? A full bucket holds 5 ½ litres of water. A jug holds 500ml of water. How many jugs full of water will fill the bucket? 	Capacity, measure Litre, I, millilitre, ml Length, height, distance, km, kilometres, cm, centimetre, m, metre, mm,	
Week 12		Solve integer scaling problems e.g. Change this recipe for 4 people to a recipe for 8 people, for 12 people, for 6 people (in preparation for ratio in Year 6)	millimetre Problem, solution Investigate, investigation	
Additional weeks				
To be used for: assessme additional	nt, conso using ar	olidation and responding to AfL nd applying activities		