

The Willows Primary School

Mental Mathematics Policy



## The Willows Primary Mental Maths Policy

### Teaching methodology and organisation

#### **Teaching time**

All pupils will receive between 10 and 15 minutes of mental mathematics teaching and learning on a daily basis. This could take place at any point during the day and will include the teaching and learning of new strategies along with recap, practice, application in different contexts including measures and money, and assessment of previously taught mental mathematics strategies

Each session will begin with a recap of strategies (between 1 and 3 depending upon the age and confidence of the pupils) taught earlier in the week or the week before. This could include application of a taught strategy in a different context. A new strategy will then be explicitly taught and modelled by the teacher. The children will then have time to practice the new skill using whiteboards and pens. Any misconceptions will be addressed immediately and used as teaching points. Children will be encouraged to make appropriate jottings which will be used to help them remember numbers/part answers rather than holding the information in their head. They will not be encouraged to write down pencil and paper methods eg column additions, that are used to calculate answers.

The session does not have to link to the objective being covered in the actual numeracy lesson. Neither does it have to be part of the actual numeracy session.

**N.B.** New methods or vocabulary for year groups are shown in red.

## The Willows Primary School Whole School Approach to Mental Mathematics

<b>Foundation Stage</b>			
<b><u>Objectives</u></b>	<b><u>Methodology Exemplification</u></b>	<b><u>MUST Teach Vocabulary</u></b>	<b><u>Key Questions</u></b>
Counting forwards and backwards to at least 20.	Don't always start at 20 when counting back or 1 counting on.	Forwards, Backwards Digit - one digit, two digit, first digit, second digit, units digit, tens digit, Number, count	
What is one more, one less using numbers up to 20.	Practical, manipulating objects	One more, Add one One less, Subtract one	What is one more than three? What is one less than 18?
Counting in 2s and 10s forwards and backwards	Counting, practical activities	Forwards, Backwards, multiple	
Number bonds to 10 - practical (addition only)	Practical	Number bond Add, sum, total, altogether, and	What do I add to 6 to make 10? etc
Order to 20	Practical	Smaller, Larger, More, Bigger Greater, Fewer, less Number before, number after, compare, order, between, next, above, below, first, second, third.....tenth,	
Doubles with an answer to 10 (doubles to 5)	Practical	Double, Two lots of	What is double 3? What are two lots of four worth?
Without counting show any number to 10	Use fingers and hands	Number, zero, one, two, three etc	Show me 2. Show me 7 Show me 5
Add or subtract two numbers	Put the number in your head and then count on for add or count back for subtraction	Add, more, and, make, sum, total, altogether How many more to make...? How many more is ... than...? Take (away), leave, how many are left over? How many have gone? Difference between	Add together 3 and 4 What is the total of 2 and 5? What is the sum of six and three? What is eight subtract two? I have five sweets. How many are left if I eat two? How many fewer is eight than three?

Properties of shapes	Whole class teaching then quick revisit. Visualising.	Face, edge, side, hollow, solid, curved, straight, round, flat, circle, triangle, square, rectangle, star, cube, pyramid, sphere, cone	How many sides does a triangle have?
----------------------	---	--	--------------------------------------

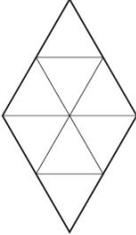
## The Willows Primary School Whole School Approach to Mental Mathematics

<b>Year 1</b>			
<b><u>Objectives</u></b>	<b><u>Methodology</u></b> <b><u>Exemplification</u></b>	<b><u>MUST Teach Vocabulary</u></b>	<b><u>Key Questions</u></b>
Counting forwards and backwards in 1s to 100, in 2s to 30, in 5s to 100 and 10s to 100 - not always starting at 1.	Don't always start at 100 when counting back or 1 when counting on. Vary the number you begin counting on or back from.	Forwards, Backwards Digit - one digit, two digit, first digit, second digit, units digit, tens digit, Number, count	
What is one more, one less and ten more/ten less for multiples of 10 up to 100	Practical, counting, manipulating objects	One more, One less, Multiple <b>Add one, Subtract one,</b>	What is ten more than 80? What is ten less than 50?
Know multiples of 2, 5 and 10 up to the tenth multiple - forwards and backwards	Counting starting at different multiples of 2, 5 and 10	multiple	
Number bonds to 10 - rapid recall and related subtraction facts. I have 6, how many do I need to make 10?	Practical, constant recall of number bonds. How many more to make 10? From given starting numbers	Number bond, Add, sum, total, altogether,	There are 10 sweets in a bag. If I give 3 to my friend, how many sweets do I have left?
Doubles to 10 (answers to 20)	Children should instantly recognise dice/domino patterns and be able to instantly know that two 4s doubled equals 8	Double, two lots of,	Two lots of six. Double eight
Ordering numbers to 50	Practical, counting, number lines, number square	Smaller, Larger, More, Bigger Greater, Fewer, less Number before, number after, compare, order, between, next, above, below, first, second, third.....tenth, <b>Teens number, first, second, third.....tenth, eleventh...twentieth, half-way between</b>	
Add or subtract two numbers	Put the number in your head and then count on for add or count back for subtraction	Add, more, and, make, sum, total, altogether How many more to make...? How many more is ... than...? Take (away), leave, how many are left over? How many have gone? Difference between <b>plus, how much less is...? equals, =, sign, tens, equal to, how much more is...?,</b>	

		<b>subtract</b>	
Properties of shapes	Whole class teaching then quick revisit. Visualising.	Face, edge, side, hollow, solid, curved, straight, round, flat, circle, triangle, square, rectangle, star, cube, pyramid, sphere, cone <b>Cuboid, cylinder</b>	How many faces/edges does a cuboid have?

## The Willows Primary School Whole School Approach to Mental Mathematics

<b>Year 2</b>			
<b><u>Objectives</u></b>	<b><u>Methodology Exemplification</u></b>	<b><u>MUST Teach Vocabulary</u></b>	<b><u>Key Questions</u></b>
Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number	Use hundreds square if subtracting multiples of 10 Put the number in your head and then count on for add or count back for subtraction	Add, more, and, make, sum, total, altogether How many more to make...? How many more is ... than...? Take (away), leave, how many are left over? How many have gone? Difference between plus, how much less is...? equals, =, sign, tens, equal to, how much more is...?, subtract <b>addition, subtraction, tens boundary</b>	What is 19 add 5? What can you use to help you find the answer? Someone said 19 plus 5 makes 23. Can you show how you know that is not the right answer?
Identifying weight of apples, rulers, pencils etc	Teach as whole class lesson first using familiar objects as a benchmark - bag of crisps is 25g, chocolate bar is 100g, loaf of bread 800g,	Estimate, Weight, heavy, heavier, heaviest, light, lighter, lightest <b>Gram, Kilogram, Half-kilogram,</b>	Estimate the weight of an apple.
Counting in odds and evens numbers	Counting with actions Hands together (1) hands apart (2) hands together (3) etc therefore odds equal together, evens apart	Odds, Evens, Multiples of 2, <b>sequence, continue, predict, rule</b>	
Derive all pairs with totals to 20 and all pairs of multiples of 10 with totals up to 100	Counting then remembering	Number bond, Add, sum, total, altogether,	
Recall doubles of all numbers to 30 (answers to 60), and the corresponding halves. Where the number in the units is under 5		Double, two lots of, <b>multiplied by 2, Half, share equally, divided by 2</b>	
Multiplication or division questions that test tables knowledge - 2s, 5s and 10s		<b>Multiplied, lots of, groups of, repeated addition, divided by,</b>	
Read and write two-digit and three-digit numbers in figures and words; describe and extend number sequences and recognise odd and even numbers	Start at any two-digit number and count on in ones to 100 or back in ones to zero	<b>Hundreds, one-, two-, three digit number, place, place value, stands for, represents, Sequence, rule</b>	Count on 6 from 63 Count back six from 78

Counting in 10s to 500 and 5s and 2s to 100 starting at any number.	Practice starting at different numbers	Forwards, Backwards Digit - one digit, two digit, first digit, second digit, units digit, tens digit, Number, count	
Round two-digit numbers to the nearest 10	Give me the multiple of 10 either side a given number Look at number and share the rule Ending 5, 6, 7, 8, 9 round up: 1, 2, 3, 4 round down	Round, nearest, round to the nearest 10	Round 73 to the nearest 10.
Find one half, one quarter and three quarters of shapes and sets of objects	Half - divide/share by two Quarter - half and half again Halve the tens, halve the units then add the answers	Fraction, one whole, Half, quarter, $\frac{3}{4}$ , partition, one quarter, two quarters, three quarters, four quarters	 <p>Shade <math>\frac{1}{4}</math> of the shape</p>
Properties of shapes	Whole class teaching then quick revisit. Visualising.	Face, edge, side, hollow, solid, curved, straight, round, flat, circle, triangle, square, rectangle, star, cube, pyramid, sphere, cone Cuboid, cylinder, circular, triangular, rectangular, pentagon, hexagon, octagon	How many sides does a pentagon have?

## The Willows Primary School Whole School Approach to Mental Mathematics

<b>Year 3</b>			
<b><u>Objectives</u></b>	<b><u>Methodology Exemplification</u></b>	<b><u>MUST Teach Vocabulary</u></b>	<b><u>Key Questions</u></b>
Finding half of whole numbers less than and including 100 (dividing by 2)	Divide by 2. Halve the tens, halve the units then add the answers	Halve, Divide by 2, Partition	What is half of 48? 86 divided by 2.
Doubling whole numbers up to 100 with answers to 200 (multiplying by 2)	Double the tens, double the units add them together	Double, partition, multiply by 2	What is double 74? Multiply 84 by 2.
Change between one unit of measurement and another ml and litres; m and km, g and kg (whole kg, litres, km)	0 ___ 1kg ___ 2kg 0 ___ 1000g ___ 2000g Adjacent number lines	Gram, kilogram, litre, millilitre,	How many m in 12km?
Rounding to the nearest 10 (three digit numbers)	Give me the multiple of 10 either side a given number Look at number and share the rule Ending 5, 6, 7, 8, 9 round up; 1, 2, 3,4 round down	<b>Round, nearest, round to the nearest 10</b>	Round 181 to the nearest 10.
Change from £20 when spending whole pounds	Link to number bonds to 20 (year 2) Put the amount spent in your head and count up to the money given.	Change, spent, spend, cost, bought, buy, pay, <b>Note, amount</b>	I spend £11 in a shop. How much change will I get from a £20 note?
Multiplication or division questions that test tables knowledge and involve the use of related vocabulary (x2, x3, x4, x5, x6, x10)	Counting Use counting stick Highlight patterns - 4, 8, 2, 6, 0 (in 4x table)	Product Divisor Divisible	How many lots of ___ in ___? What is the remainder when 14 is divided by three? What is the product of 3 and 6?
÷ 4	Halve and halve again	halve	What is 36 divided by 4? What is 44 divided by 4?
x4	Double and double again.	double	What is the product of 12 and 4? What is 13 multiplied by 4? How many in four lots of 14?

<p>Write a three digit number in figures including with zeros in the tens column.</p>	<p>Practical, place value cards Write under HTU headings to begin with.</p>	<p>Hundreds, one-, two-, three digit number, place, place value, stands for, represents, Sequence, rule, <b>one hundred more, one hundred less</b></p>	<p>Four hundred and two - 402 Seven hundred and twenty - 720</p>
<p>Properties of shapes</p>	<p>Whole class teaching then quick revisit. Visualising.</p>	<p>Face, edge, side, hollow, solid, curved, straight, round, flat, circle, triangle, square, rectangle, star, cube, pyramid, sphere, cone Cuboid, cylinder, circular, prism, triangular, rectangular, pentagon, hexagon, octagon, <b>pentagonal, hexagonal, octagonal, quadrilateral, semi-circle, 2D, 3D, vertex, vertices.</b></p>	<p>How many sides does a quadrilateral have? Name to two quadrilaterals.</p>
<p>Find one half, one quarter and three quarters of shapes and sets of objects</p>	<p>Half - divide/share by two Quarter - half and half again Halve the tens, halve the units then add the answers</p>	<p><b>Fraction, one whole, Half, quarter, <math>\frac{3}{4}</math>, partition, one quarter, two quarters, three quarters, four quarters, divide</b></p>	<div data-bbox="1612 565 1751 797" data-label="Image"> </div> <p>Shade <math>\frac{1}{4}</math> of the shape</p>

## The Willows Primary School Whole School Approach to Mental Mathematics

<b>Year 4</b>			
<b><u>Objectives</u></b>	<b><u>Methodology/Exemplification</u></b>	<b><u>MUST Teach Vocabulary</u></b>	<b><u>Key Questions</u></b>
Write a five digit number in figures including with zeros in the tens or hundreds column including both.	Two thousand and seven - 2007 Four thousand and fifty six - 4056 Eight thousand, seven hundred and one - 8701	Hundreds, one-, two-, three digit number, place, place value, stands for, represents, Sequence, rule, one hundred more, one hundred less Digit, Unit, ten, hundred, <b>thousand, ten thousand, hundred thousand, million, four digit number, numeral</b>	Write twenty six thousand, five hundred and eight in digits.
To quickly x a number by 5	x by 10 and then halve the answer E.g. $34 \times 5 = (34 \times 10) \div 2 = 340 \div 2 = 170$ .	Multiply Product halve	$46 \times 5$
Multiplication or division questions that test tables knowledge. (all up to $10 \times 10$ )	Use related facts (e.g. to find 8x table double, double 2x table; to find 6x table double 3x table Area of rectangles/squares Counting Use counting stick Highlight patterns - 4, 8, 2, 6, 0 (in 4x table)	Product, Divisor, <b>Divisible by Factor</b> , lots of, groups of, times, multiply, multiplied by, multiplication, multiple, divide, divided by, division, divisible by, <b>inverse</b> , equal groups of	How many lots of ____ in ____? What is the remainder when 25 is divided by four? What is the product of 3 and 6?
Find a number half way between 2 numbers.	Add the 2 numbers together and divide by 2. What number is half way between 16 and 24? $16 + 24 = 40$ $40 \div 2 = 20$ . Therefore 20 is halfway between 16 and 24.		
Change from £2 when spending multiples of five pence	Put the amount spent in your head and then count up to the money handed to the shop keeper. Practical	Change, spent, spend, cost, bought, buy, pay, Note, amount	If I spend 75p in a shop, how much change will I get from £2?
Fractions that add to make a whole	Knowing that $7/7$ , $9/9$ etc is a whole	<b>Eighth, sixth, fifth, twentieth</b>	$4/7$ of the class like horses, how many do not?
Change between one unit of measurement and another - minutes and hours	Minutes in whole and half hours Adjacent number lines $0$ ____ $1/2$ hour ____ $1$ hour $0$ ____ 30mins ____ 60 mins	<b>Measurement, unit,</b>	How many minutes in 2.5 hours?

Rounding to the nearest 100	Give multiples of 100 before and after given number. Look at number and share the rule Ending 5, 6, 7, 8, 9 round up; 1, 2, 3,4 round down	Round to the nearest hundred, integer	Write 261 to the nearest 100
Properties of shapes e.g.	Whole class teaching then quick revisit. Visualising.	Face, edge, side, hollow, solid, curved, straight, round, flat, circle, triangle, square, rectangle, star, cube, pyramid, sphere, cone Cuboid, cylinder, circular, triangular, rectangular, pentagon, hexagon, octagon, pentagonal, hexagonal, octagonal, quadrilateral, semi-circle, 3d, 2d, vertex, vertices. <b>three dimensional, two dimensional, spherical, cylindrical, tetrahedron, polyhedron, equilateral triangle, isosceles triangles, heptagon, polygon</b>	How many faces/edges has a cuboid?  What is the name of a shape with 6 sides?
+9, 19, 29 etc	Add next multiple of 10 then subtract 1	Add, multiple of ten, subtract	
+11, +21, +31	Add 10 then one more	One more	
Change from £1	Number bonds to 10 (in hundredths column) number bonds to nine in tenths column	Change, spent, spend, cost, bought, buy, pay, Note, amount	I spend 57p. How much change will I get from £1?
Find a simple fraction of a number or shape.	What is $\frac{1}{3}$ of 15? Divide the number (15) by the denominator (3).	Fraction, divide, denominator.	Find $\frac{1}{5}$ of 20p.

## The Willows Primary School Whole School Approach to Mental Mathematics

<b>Year 5</b>			
<b><u>Objectives</u></b>	<b><u>Methodology Exemplification</u></b>	<b><u>MUST Teach Vocabulary</u></b>	<b><u>Key Questions</u></b>
Multiplication or division questions that test tables knowledge.	Use related facts (e.g. to find 8x table double, double 2x table; to find 6x table double 3x table Area of rectangles/squares Counting Use counting stick Highlight patterns - 4, 8, 2, 6, 0 (in 4x table) <b>Find fractions of numbers with a numerator of one.</b> <b>Area of rectangles/squares</b>	Product, Divisor, Divisible by Factor, lots of, groups of, times, multiply, multiplied by, multiplication, multiple, divide, divided by, division, divisible by, inverse, equal groups of	How many lots of ____ in ____? What is the remainder when 25 is divided by seven?  What is five multiplied by 4 multiplied by 2?
Identify multiples of 20, 30, 40, 50 etc and 200, 300, 400, 500 etc	Multiples of 2 ten times bigger for 20, 30, 40 etc and 100 times bigger for 200, 300 etc	Multiple, ten times bigger, one hundred times bigger,	A number multiplied by four equals two hundred and eighty. What is the number?
Be able to identify FACTORS (no's that go into (divide) numbers e.g. 1, 2, 3 and 6 are all factors of 6) and MULTIPLES (times tables e.g. multiples of 20 are 20, 40, 60, 80 etc).	20 1, 2, 4, 5, 10 20 Start on the outside and work identifying pairs beginning at one, then two and so on	Factor, multiple, pair, divide, go into, divisible by, <b>divisibility</b>	List all of the factors of 40
Change from £5 after buying two products	Add the products together first and then think about number bonds to ten for the pence, number bonds to nine for the tenths pence column and then number bonds which are one less than the money handed to the shop keeper.	Change, spent, spend, cost, bought, buy, pay, Note, amount	I buy two apples which cost 17p each. How much change do I get from £5?
Approximate size of angle	Use a clock and share that between consecutive numbers is $30^{\circ}$ ; find right angles	Right angle, acute, obtuse, reflex, degree, whole turn, quarter turn, half turn	Estimate the size of a shown angle.
Calculate the perimeter and area of shapes e.g. a square has sides of 5 cm what is the area (length x width = $5 \times 5 = 25 \text{ cm}^2$ ) or the perimeter (round the outside = $5 + 5 + 5 + 5 = 20\text{cm}$ )		Area, perimeter	The perimeter of a regular octagon is forty centimetres. What is the length of each side?

Find a fraction of a number	What is $\frac{1}{7}$ of 560? Divide the number (560) by 7. What are $\frac{2}{3}$ of 180 = $(180 \div 3)$ then $\times 2$ because you need 2 thirds.	Fraction Divide multiply	Joe has some pocket money. He spends three quarter of it. He has fifty pence left. How much pocket money did he have?
Find 2% of 400	First find 1% (which equals $\frac{1}{100}$ ) $400 \div 100 = 4$ . Now find 2% , so you need 2 x the answer to 1% = $4 \times 2 = 8$	Percentage, per cent, %	
Find a percentage of an amount	Change the percentage to a fraction 10% of 600. Change the 10% to $\frac{1}{10}$ , so you are finding $\frac{1}{10}$ of $600 = 600 \div 10 = 60$	Percentage, per cent, %	 <p>What percentage of the bar is shaded?</p>
Find a number half way between 2 numbers	Add the 2 numbers together and divide by 2. What number is half way between 38 and 57? $38 + 57 = 95$ $95 \div 2 = 47.5$ . Therefore 47.5.	Add, divide by 2,	
Add together positive and negative numbers eg. $-2 + 5 = 3$	Use number lines (horizontal and vertical)	Positive, negative, above zero, below zero, minus	
Write a six number in figures (with zeros in eg. twenty thousand and sixty three).	Emphasise the need for a comma to separate the thousands from the hundreds. Get the children to say comma when writing down the number. E.g. two hundred and three thousand, four hundred and eight = 203, 408 If the children are unsure they should write the place value column headings and write the number beneath.  HTH TTH T, H T U 2 0 3,4 0 8	Hundreds, one-, two-, three digit number, place, place value, stands for, represents, Sequence, rule, one hundred more, one hundred less Digit, Unit, ten, hundred, thousand, ten thousand, hundred thousand, million, four digit number, numeral	
Change from £2/£5/£10 when spending pounds and pence	Number bond to 10, number bond to 9, number bond to one less than the money.	Change, spent, spend, cost, bought, buy, pay, Note, amount	
Rounding to the nearest 1000	Multiples of 1000 either side of the number. Look at number and share the rule Ending 5, 6, 7, 8, 9 round up; 1, 2, 3,4 round down	Round to the nearest 1000	
Change between one unit of measurement and another - mm	Adjacent number lines including 0km $\frac{1}{4}$ km $\frac{1}{2}$ km _____1km	Measure, measurement, size, unit, metric unit, metre, centimetre,	How many cm in 3m?

- cm; cm and m including cm in whole, half and quarter of a metre and kilometre	0km_____250m_____500m_____1000m	kilometre, millimetre,	
---	---------------------------------	------------------------	--

## The Willows Primary School Whole School Approach to Mental Mathematics

<b><u>Year 6</u></b>			
<b><u>Objectives</u></b>	<b><u>Methodology Exemplification</u></b>	<b><u>MUST Teach Vocabulary</u></b>	<b><u>Exemplification</u></b>
Multiplication or division questions that test tables knowledge. <b>YOU MUST LEARN ALL OF YOUR TABLES.</b>	Use related facts (e.g. to find 8x table double, double 2x table; to find 6x table double 3x table Area of rectangles/squares Counting Use counting stick Highlight patterns - 4, 8, 2, 6, 0 (in 4x table) <b>Find fractions of numbers with a numerator of one.</b> <b>Area of rectangles/squares</b>	Product, Divisor, Divisible by Factor, lots of, groups of, times, multiply, multiplied by, multiplication, multiple, divide, divided by, division, divisible by, inverse, equal groups of	How many lots of ____ in ____? What is the remainder when 25 is divided by seven? When a number is divided by 7, the answer is three remainder 4. What is the number?
Know your fraction/decimal/percentage equivalents, especially:- i. $\frac{1}{2} = 0.5 = 50\%$ ii. $\frac{1}{4} = 0.25 = 25\%$ iii. $1/10 = 0.1 = 10\%$ so $3/10 = 0.3 = 30\%$ etc iv. $1/3 = 0.333333 = 33.333\%$ $2/3 = 0.666666 = 66.6666\%$ v. $1/100 = 0.01 = 1\%$ so $4/100 = 0.04 = 4\%$ so $34/100 = 0.34 = 34\%$ vi. $1/5 = 0.2 = 20\%$ $1/20 = 0.05 = 5\%$	Always work in fraction families.	Equivalent, fraction, decimal, percentage	0.14, 0.24, 0.34, 0.44, 0.54 Circle the decimal that is closest to one quarter.  Write zero point seven as a fraction.  60%, 20%, 5%, 15%, 75% Put a ring around the percentage that is equal to three-fifths.
Change between one unit of measurement and another	Adjacent number lines including 0kg ____ 1/4 km ____ 1/2km ____ 1km 0kg ____ 250m ____ 500m ____ 1000m	Measure, measurement, size, unit, metric unit, metre, centimetre, kilometre, millimetre,	How many m in 12.5 km? How many minutes in 2.5 hours?  How many grams are there in 2.7kg?

Rounding to nearest 10, 100 and 1000 (including decimals)	Give whole number before and after the given decimal and then use rules below. Look at number and share the rule Ending 5, 6, 7, 8, 9 round up; 1, 2, 3, 4 round down		
Be able to identify FACTORS, including those of square and prime numbers (no's that go into (divide) numbers e.g. 1, 2, 3 and 6 are all factors of 6) and MULTIPLES (times tables e.g. multiples of 20 are 20, 40, 60, 80 etc).	20 1, 2, 4, 5, 10 20 Start on the outside and work identifying pairs beginning at one, then two and so on	Factor, multiple, pair, divide, go into, divisible by, divisibility Square number, prime number	List all of the factors for 36.
Add or subtract 2 decimal numbers eg 4.8 - 3.9	Make the numbers ten times bigger and then the answer ten times smaller. 4.8 - 3.9 becomes 48 subtract 39 = 9, then make the answer 10 times smaller eg. 0.9	Ten times bigger, ten times smaller, decimal point, tenths, hundredths, thousandths	
$\times 20$ -	First <u>double</u> the number and then make it 10 x BIGGER.	Double, ten time bigger, number,	
$\div 20$ -	First halve the number and then make it 10x smaller. E.g. 60 divided by 20 Half of 60 = 30. Ten times smaller than 30 = 3		
If n is 3 what number is six greater than twice n	Direct teaching and then using other strategies - $3n = 3 \times n$		When m equals twenty, what is the value of ten plus three m?
Double or halve a decimal number	Remove decimal point and then put back in after the operation	Decimal, decimal point, hundredth, thousandth, tenth, decimal place, place value	eg. double 1.6 halve 3.6
Order decimal numbers or find the biggest or smallest number	Start with the most significant digit working towards the least significant	Decimal, decimal point, hundredth, thousandth, tenth, decimal place, place value	3.76 5.6 9.1 0.877 - circle the smallest number
Find a number half way between 2 numbers -	Add the 2 numbers together and divide by 2. E.g. what number is half way between 16 and 24. $16 + 24 = 40$ $40 \div 2 = 20$ . Therefore 20 is halfway between 16 and 24.	Half way between, add, divide by 2	What number is halfway between zero point three and zero point four? (use knowledge of number-lines)
$\times 25$	$\times$ by 100 and then $\div$ by 4 (halve and halve again).	Multiply, halve	

I think of number, halve it and add four. My answer is 52. What number did I think of?	Use inverse	inverse	
Square numbers and square roots	Verbal recall	Square number, square root, <b>squared, one squared, two squared etc.</b>	What is 7 squared? What is the square root of 81?