



Key Skills

Recall a range of calculations using mixed operations.

Recall shape properties.

Add and subtract using a range of strategies.

Be confident, secure and happy in mental number knowledge.

Mental Mathematics Skills Concepts Progression

	CLASS ONE	CLASS TWO		CLASS THREE		CLASS FOUR	
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mental Mathematics	<p>Count in steps of 2 and 10 confidently.</p> <p>Add simple numbers mentally e.g. 2+2</p> <p>Subtract simple numbers mentally e.g. 2-2</p> <p>Recall names of shapes.</p> <p>Know simple properties of 2D shapes.</p> <p>Know some names of 3D shapes.</p> <p>Mathematical reasoning and explaining strategies.</p> <p>Say one more/less than a given number.</p> <p>Follow instructions using positional language.</p>	<p>Confidently count in 2,5 10 times tables and answer corresponding questions.</p> <p>Know that addition can be done in any order.</p> <p>Find a small difference by counting up.</p> <p>Number bonds to 10 and 20.</p> <p>Knowledge of doubles and near doubles.</p> <p>Know how to add 9 to a number by adding 10 and subtracting 1.</p> <p>Use addition and subtraction as inverse operations.</p> <p>Add simple numbers mentally- up to 2 digits and beyond.</p> <p>Know days, months and seasons in order.</p> <p>Know properties of 2D and some 3d shapes e.g. name the shape.</p> <p>Practise counting around the clock- 5's, 10's etc</p>	<p>Confidently count in 2,5 10, 3, 4 times tables and answer corresponding questions.</p> <p>Find a difference by counting up using 2 digit numbers.</p> <p>Know patterns of similar calculations e.g. 3=5=8, 13=5=18.</p> <p>Know the inverse calculations for addition and subtractions when asked and prompted.</p> <p>Add and subtract mentally bridging through 10 or 100.</p> <p>Use knowledge of number facts and place value to multiply or divide mentally e.g.10/2= 5</p> <p>Confidently recite number bonds to 20.</p> <p>Know left/right turns and show this physically.</p>	<p>Confidently count in 3,4, 6, 7 times tables and answer corresponding questions with pace.</p> <p>Understand that addition can be done in any order.</p> <p>Find the difference by counting up using 3 digit numbers.</p> <p>Identify near doubles e.g. 35+36= 71</p> <p>Add and subtract 9 by adding 10 and subtracting 1 using 3 digit numbers.</p> <p>Use patterns of similar calculations e.g. 4+8=12, 20+80= 120, 400+800= 1200.</p> <p>Use the relationship between addition and subtraction.</p> <p>Complete some inverse calculations.</p> <p>Use knowledge of place value to add 3 digit numbers- use number bonds to help.</p> <p>Add and subtract numbers mentally bridging 10 and 100.</p>	<p>Confidently know times tables up to 8X10. Be able to answer times tables questions with pace.</p> <p>Add large numbers by partitioning mentally. E.g. adding tens first, then units and then the total.</p> <p>Find a small difference by counting up- up to 4 digit numbers.</p> <p>Use similar patterns of calculations e.g. 2x3=6, 2x30=60, 2x300=600.</p> <p>Use patterns of similar calculations e.g. 4+8=12, 20+80= 120, 400+800= 1200.</p> <p>Add and subtract numbers mentally by using knowledge of number bonds to 10 and 100.</p> <p>Use knowledge or doubles or halves to multiply and divide e.g. Double 34= 30+30+4+4=68</p> <p>Know that multiplication and division are inverse operations e.g. 7x5=35 and 35÷5= 7.</p> <p>Begin to recite equivalent measures.</p>	<p>Mentally recall converting fractions to decimals to percentages and vice versa.</p> <p>Add using methods such as partitioning e.g. 324+58= 324+50+8</p> <p>Look for pairs that make ten when adding or subtracting.</p> <p>Add simple decimals using partitioning.</p> <p>Add and subtract simple amounts of money using place value.</p> <p>Know all properties of shapes and identify the correct language.</p> <p>Add or subtract to the nearest multiple of 10,100 or 1000 then adjust. E.g. 274+99= 274+100-1</p> <p>Identify near doubles e.g. 1.5 +1.6= double 1.5+0.1=3.1</p> <p>Know and use inverse operations for addition and subtractions and multiplication and division.</p>	<p>Find a difference by counting up through the next multiple of 10,100 or 100.</p> <p>Identify near doubles e.g. work out that 421+313= double 400 +21 minus 13.</p> <p>Mentally recall how many sides, edges, faces are in a shape.</p> <p>Mentally recall multiplication facts up to 12x12 quickly.</p> <p>Add mentally three or more multiples of 10 e.g. 80+70+40+90=</p> <p>Respond to oral questions such as 0.05+0.3= and explain the method clearly.</p> <p>Add and subtract large numbers mentally.</p> <p>Use related facts for doubling or halving. E.g. double 176= 200+140+12=352</p> <p>Use number facts and knowledge of place value to multiply or divide mentally by 10, 100, 100. E.g. 84÷100= 0.84</p>

		<p>and use appropriate language.</p> <p>Understand how to read scales quickly.</p>	<p>Know the properties of 3D shapes and describe them accurately.</p> <p>Understand how to read and interpret scales accurately.</p>	<p>Shift digits to the left/right to multiply/divide by 10.</p> <p>Use knowledge of number facts to multiply or divide mentally.</p>	<p>Mentally order numbers with pace.</p> <p>Begin to add some simple decimals mentally.</p>	<p>Know all multiplication facts up to 12x12 and recite these when asked.</p> <p>Doubling and halving e.g. double 78= double 70 +double 8</p> <p>Partitioning- e.g. 13x 21= (13x20) and (13x1)</p> <p>Use place value to multiply and divide by 10,100 and 1000. E.g. 30=400= 13,000</p> <p>8200÷10=820</p> <p>8200÷100=82</p> <p>8200÷1000= 8.2</p>	<p>Know division facts and how to work them out mentally, explaining methods.</p> <p>Mentally recall converting fractions to decimals to percentages and vice versa.</p> <p>Add decimals quickly.</p> <p>Add percentages quickly.</p> <p>Add amounts of money mentally, explaining methods.</p> <p>Mentally put numbers in order. Including fractions and decimals.</p> <p>Mentally convert measures quickly. E.g. grams into kg etc.</p>
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