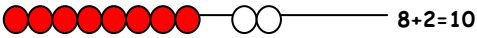
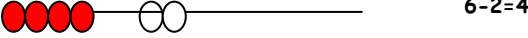
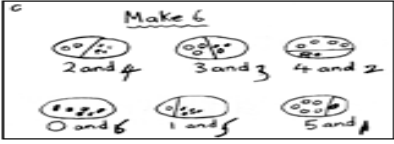



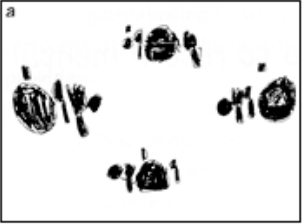
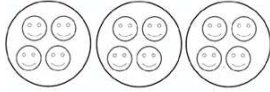


	Addition	Subtraction	Multiplication	Division
YR	<p>Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. Children use practical methods to discover about addition e.g. finding how many biscuits are added to a plate.</p> <p>Bead strings or bead bars can be used to illustrate simple addition</p>  <p>$8+2=10$</p> <p>Children begin to use numbered lines to support their own additions using a numbered line to count on in ones. Children should be using the count all method. Teacher demonstrates how to write a simple number sentence e.g. $5+2=7$ Children concentrate on numbers to 10.</p>	<p>Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. Children use practical methods to discover about addition e.g. taking fruit from the trolley.</p> <p>Bead strings or bead bars can be used to illustrate simple subtraction.</p>  <p>$6-2=4$</p> <p>Children begin to use numbered lines to support their own subtractions using a numbered line to count back in ones. Teacher demonstrates how to write a simple number sentence e.g. $7-2=5$ Children concentrate on numbers to 10.</p>	<p>Children will experience equal groups of objects in a number of practical contexts e.g. needing 3 lots of 2 apples.</p> <p>They will count in 2s and 10s and begin to count in 5s.</p> <p>They will work on practical problem solving activities involving equal sets or groups.</p>	<p>Children will understand equal groups and share items out in play and problem solving e.g. sharing 10 sweets between 2 people</p> <p>They will count in 2s and 10s and later in 5s.</p>
Y1	<p>Children begin to use pictures to demonstrate their maths and they begin choose which operation to use.</p>  <p>Bead strings or bead bars can be used to illustrate addition including bridging through ten by counting on 2 then counting on 3.</p>  <p>They use numbered numberlines and practical resources to support addition sums with numbers to 20. Children should be using count on rather than the count all method Children begin to write their own simple number sentences.</p>	<p>Children begin to use pictures to demonstrate their maths and they begin choose which operation to use.</p>  <p>Bead strings or bead bars can be used to illustrate subtraction including bridging through ten by counting back 3 then counting back 2.</p>  <p>$13-5=8$</p> <p>Children use numbered lines to support their own subtraction sums with numbers to 20</p> <p>The numberline should also be demonstrated to show that $6 - 3$ means the 'difference between 6 and 3' or 'the difference between 3 and 6' and how many jumps they are apart. Children begin to write their own simple number sentences.</p>	<p>Children will experience equal groups of objects in practical contexts</p> <p>They will continue to count in 2s, 5s and 10s.</p> <p>They will work on practical problem solving activities involving equal sets or groups.</p> <p>Teacher demonstrates how to write a simple number sentence e.g. $7 \times 2 = 14$ using the phrase 'lots of'</p> <p>Children will begin to use pictorial representation for their calculations:</p> 	<p>Children will understand equal groups and share items out in play and problem solving.</p> <p>They will continue to count in 2s, 5s and 10s.</p> <p>Teacher demonstrates how to write a simple number sentence e.g. $10 \div 2 = 5$ using the phrase 'shared by'</p> <p>Children will begin to use pictorial representation for their calculations:</p> 

Children should not be made to go onto the next stage if they are not ready or if they are not confident.

Children should be encouraged to approximate their answers before calculating.

Children should be encouraged to consider if a mental calculation would be appropriate before using written methods.

	Addition	Subtraction	Multiplication	Division
Y2	<p>Children will begin to use 'empty number lines' themselves starting with the larger number and counting on.</p> <p>✓ First counting on in tens and ones.</p> <p>$34 + 23 = 57$</p> <p>✓ Then helping children to become more efficient by adding the units in one jump (by using the known fact $4 + 3 = 7$).</p> <p>$34 + 23 = 57$</p> <p>✓ Followed by adding the tens in one jump and the units in one jump.</p> <p>$34 + 23 = 57$</p> <p>✓ Bridging through ten can help children become more efficient.</p> <p>$37 + 15 = 52$</p> <p>Inverses: Children should show an understanding that addition is the inverse of subtraction and use this to discover sums like the following:</p> <p>$\square + 5 = 20$ $17 + \square = 25$ $\square - 5 = 20$</p>	<p>Children will begin to use empty number lines to support calculations.</p> <p>Counting back:</p> <p>✓ First counting back in tens and ones.</p> <p>$47 - 23 = 24$</p> <p>✓ Then helping children to become more efficient by subtracting the units in one jump (by using the known fact $7 - 3 = 4$).</p> <p>$47 - 23 = 24$</p> <p>✓ Subtracting the tens in one jump and the units in one jump.</p> <p>$47 - 23 = 24$</p> <p>✓ Bridging through ten can help children become more efficient.</p> <p>$42 - 25 = 17$</p> <p>Difference: Children also use the number line to count on to find the difference of two numbers close together.</p> <p>$102 - 89 = 13$</p>	<p>Children will develop their understanding of multiplication and use jottings to support calculation:</p> <p>✓ Repeated addition</p> <p>3×5 is $5 + 5 + 5 = 15$ or 3 lots of 5.</p> <p>Repeated addition can be shown easily on a number line:</p> <p>$5 \times 3 = 5 + 5 + 5$</p> <p>and on a bead bar:</p> <p>$5 \times 3 = 5 + 5 + 5$</p> <p>✓ Commutativity Children should know that 3×5 has the same answer as 5×3. This can also be shown on the number line.</p> <p>✓ Arrays Children should be able to model a multiplication calculation using an array. This knowledge will support with the development of the grid method.</p> <p>$5 \times 3 = 15$</p> <p>$3 \times 5 = 15$</p>	<p>Children will develop their understanding of division and use jottings to support calculation</p> <p>✓ Sharing equally</p> <p>6 sweets shared between 2 people, how many do they each get?</p> <p>✓ Grouping or repeated subtraction There are 6 sweets, how many people can have 2 sweets each?</p> <p>✓ Repeated subtraction using a number line or bead bar</p> <p>$12 \div 3 = 4$</p> <p>The bead bar will help children with interpreting division calculations such as $10 \div 3$ or 'how many 6s make 10?'</p> <p>✓ Commutativity Children should discover that division is not commutative i.e. $12 \div 3 = 4$ is not the same as $3 \div 12 = 0.25$</p> <p>Inverses Children should also begin to see the relationship between multiplication and division as the inverse of one another. This should be conducted through the use of doubling and halving.</p>

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