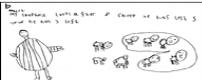
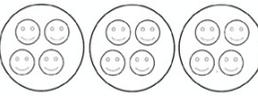
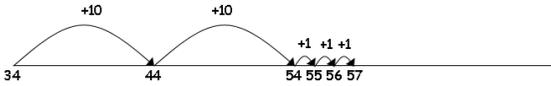
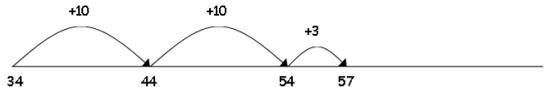
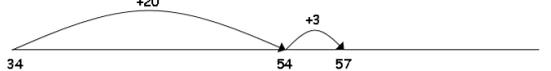
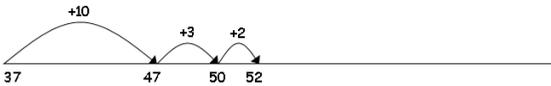
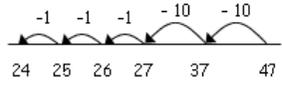
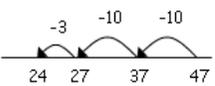
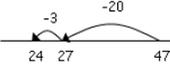
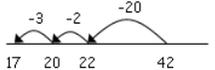
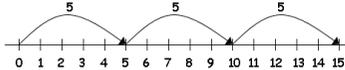
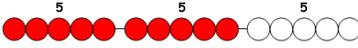
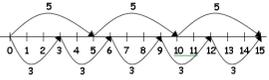
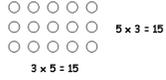
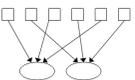


	Addition	Subtraction	Multiplication	Division
Rec	<p>Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures, etc.</p>  <p>Bead strings or bead bars can be used to illustrate addition</p>  <p style="text-align: right;">$8+2=10$</p> <p>They use numberlines and practical resources to support calculation and teachers <i>demonstrate</i> the use of the numberline.</p>	<p>Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures etc.</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 style="text-align: right;">$6-2=$</p> <p>They use numberlines and practical resources to support calculation. Teachers <i>demonstrate</i> the use of the numberline.</p>	<p>Children will experience equal groups of objects.</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. They will count in 2s and 10s and later in 5s.</p> 
Y1	<p>using pictures</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 numberlines and practical resources to support calculation and teachers <i>demonstrate</i> the use of the numberline.</p> <p>Children then begin to use numbered lines to support their own calculations using a numbered line to count on in ones.</p>	<p>using pictures</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 style="text-align: right;">$13-5=$</p> <p>Children then begin to use numbered lines to support their own calculations - using a numbered line to count back in ones.</p> <p>The numberline should also be used 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.</p>	<p>Children will experience equal groups of objects.</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. They will count in 2s and 10s and later in 5s.</p> 

	Addition	Subtraction	Multiplication	Division
<p>Y2</p>	<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>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>Counting on: The number line should still show 0 so children can cross out the section from 0 to the smallest number. They then associate this method with 'taking away'.</p>	<p>Children will develop their understanding of multiplication and use jottings to support calculation:</p> <p>✓ Repeated addition $3 \text{ times } 5 \text{ is } 5 + 5 + 5 = 15 \text{ or } 3 \text{ lots of } 5 \text{ or } 5 \times 3$</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>Children will develop their understanding of division and use jottings to support calculation</p> <p>✓ Sharing equally 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 $12 \div 3 = 4$</p>   <p><small>The bead bar will help children with interpreting division calculations such as $10 \div 5$ as 'how many 5s make 10?'</small></p> <p>✓ Using symbols to stand for unknown numbers to complete equations using inverse operations</p> <p>$\square \div 2 = 4$ $20 \div \triangle = 4$ $\square \div \triangle = 4$</p>