	Addition	Subtraction	Multiplication	Division
Rec	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. Bead strings or bead bars can be used to illustrate addition	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.	Children will experience equal groups of objects. They will count in 2s and 10s and begin to count in 5s. They will work on practical problem solving activities involving equal sets or groups.	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.
У1	using pictures         Image: Constraint of the second se	ores.         ✓       Children will continue to use pictures.         ✓       Bead strings or bead bars can be used to illustrate subtraction including bridging through ten by counting back 3 then counting back 2.         ●       ●	Children will experience equal groups of objects. They will count in 2s and 10s and begin to count in 5s. They will work on practical problem solving activities involving equal sets or groups. <b>Doubling and halving</b> Find doubles to double 5 using fingers e.g. double 3 <b>Orouping</b> Begin to use visual and concrete arrays and sets of objects to find the answers to 'three lots of four' or 'two lots of five' e.g. three lots of four	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. Doubling and halving Find half of even numbers up to 12, including realising that it is hard to halve an odd number







	Addition	Subtraction	Multiplication	Division
	✓ Carry below the line.	<ul> <li>Partitioning and decomposition</li> <li>Demonstrated by the teacher as:</li> </ul>	Children will continue to use arrays where appropriate leading into the grid method of multiplication.	Children should be able to: Use the vertical method:
У4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	754 = <u>- 86</u> Step 1 700 + 50 + 4 - <u>80 + 6</u> Step 2 700 + 40 + 14 <i>(adjust from T to U)</i>	Partitioning $38 \times 5 = (30 \times 5) + (8 \times 5)$ = 150 + 40 = 190	Short division TU $\div$ U 72 $\div$ 3 3)72
	Using similar methods, children will: ✓ add several numbers with up to 4 digits <u>including</u> <u>those with the same numbers of decimal places;</u> ✓ add two or more sums of money, with different numbers of digits, adjusting from the pence to the pounds;	- <u>80 + 6</u> Step 3 600 <u>+ 140</u> + 14 <i>(adjust from H to T)</i> - <u>80 + 6</u>	Grid method TU x TU (Long multiplication - multiplication by more than a single digit) 72 x 38 Children will approximate first 72 x 38 is approximately 70 x 40 = 2800 x 70 2	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
	<ul> <li>know that the decimal points should line up under each other, particularly when adding or subtracting mixed amounts of lengths, weights or capacities.</li> <li>E.g. £3.58 + 78p or 2.15 m + 35cm</li> </ul>	$-\frac{80 + 6}{600 + 60 + 8} = 668$ Decomposition Recorded by the children using the standard method of decomposition:	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Children can start to subtract larger multiples of the divisor, e.g. 30× Short division HTU + U 196 + 6 <u>32 r 4</u> 6) 196
		614 1 <b>78</b> 4 <u>- 86</u> 668	(Short multiplication – multiplication by a single digit) 346 × 9 Children will approximate first 346 × 9 is approximately 350 × 10 = 3500	$\begin{array}{c c} -\underline{180} \\ -\underline{16} \\ -\underline{12} \\ 4 \\ Answer: 32 remainder 4 or 32 r 4 \end{array}$
		Children should: ✓ be able to subtract numbers with up to 4 digits; ✓ using this method, children should also begin to find the difference between two three-digit sums of money, with or without 'adjustment' from the pence to the pounds; Know that decimal points should line up under each other.	✓ Children will know all times tables to 12 × 12	Any remainders should be shown as integers, i.e. 14 remainder a or 14 r 2. ✓ Children need to be able to decide what to do after
		Where the numbers are involved in the calculation are close together or near to multiples of 10, 100, 1000 etc counting on using a number line should be used. 1209 - 388 = 821		division and round up or down accordingly. They should make sensible decisions about rounding up or down after division.
		+12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		

Addition	Subtraction	Multiplication	Division
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	Addition	Subtraction	Multiplication	Division
У5	Addition         Use column addition to add two or three whole numbers with up to 5 digits         Ensure 'carry overs' go under the answer line.         587       3587         + 475       + 675         1062       4262         11       111         Using similar methods, children will:         V       Use column addition to add any pair of 2-place decimal numbers, including amounts of money including those with different numbers of decimal places;         V       Know that decimal points should line up under each other, particularly when adding mixed amounts, e.g. 3.4 m - 280 cm.	Decomposition         614 1         754        286         468         Children should:         ✓       Confidently be able to subtract numbers using decomposition, inc from numbers incorporating a zero.         ✓       be able to subtract numbers with up to 5 digits;         ✓       be gin to find the difference between two decimal fractions with up to three digits and same number of decimal places;         ✓       know decimal points should line up under each other	<ul> <li>✓ Children will learn to use the standard method of short multiplication to ThHTU × U and TU.th × U in the context of money.</li> <li>✓ Ensure 'carry overs' go under the answer line.</li> <li>Th H T U         <ul> <li>6 4 8 1</li> <li>× 9</li> <li>5 8 3 2 9</li> <li>← Answer</li> </ul> </li> <li>Children will develop the Grid method for long multiplication as below, moving on to the standard method of long multiplication when ready (see year 6):</li> </ul>	<ul> <li>✓ Children will use the standard written method of short division to solve short division ThHTU ÷ ≤ 12.</li> <li>Remainders could be shown as integers, i.e. 14 remainder 2 or 14 r 2 or as fractions</li> <li>Children need to be able to decide what to do after division and round up or down accordingly. They should make sensible decisions about rounding up or down after division.</li> <li>Long division ThHTU ÷ TU</li> <li>972 ÷ 36         <ul> <li>27                 <ul> <li>-720</li></ul></li></ul></li></ul>

	Addition	Subtraction	Multiplication	Division
У6	Children should extend the carrying method to number with any number of digits.         7648       6584       42         + 1486       + 5848       6432         9134       12432       786         111       3       + 4681         111       3       + 4681         111       3       + 4681         111       3       + 4681         1121       Using similar methods, children will       ×         ✓       add several numbers with up to 6 digits including thos without a whole number component;         ✓       know that decimal points should line up under each other, particularly when adding or subtracting mixed amounts, e.g. 401.2 + 26.85 + 0.71.         ✓       Be able to check additions by their knowledge of inverse operations.	5131 \$467 - 2684 3783 Children should: Solution be able to subtract numbers with up to 6 of digits; Be able to check answers by using an inverse operation Be able to check answers by using an inverse operation Be able to subtract two or more decimal fractions with up to three digits and up to 3 decimal places; Know decimal points should line up under each other.	Standard method         Children should:         ✓       Be able to use the standard method of long multiplication to ThHTU x TU as below         327         x       53         98:1       327 x 3         16:3:50       327 x 50         ✓       Be able to check answers by using an inverse operation         ✓       Be able to check answers by using an inverse operation         ✓       Through their developing knowledge of decimal facts associated with multiplication tables they should progress to multiplying TU.t × U.t by long multiplication and adjustment. E.g. change it to HTU × TU by multiplying both by 10, then using the standard method and finally dividing the answer by 10 to compensate.	Standard method for short division         Children should:         ✓       Continue to use written methods to solve short division ThHTU ÷ TU (bus stop method)         ✓       Children should know that decimal points line up under each other.         ✓       Know how to decompose and divide the remainder using further columns of decimals.         Ø       1.375         Ø       11306040         ✓       Know when to give an exact answer and how to round to an appropriate degree of accuracy.         ✓       Be able to check answers by using an inverse operation         Standard method for Long division HTU ÷ TU Children should:       ✓         ✓       Know how to use the standard method for long division         ✓       Through their developing knowledge of decimal facts associated with multiplication tables they should progress to dividing TU.t ÷ U.t by adjustment and long division.