	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. Bead strings or bead bars can be used to illustrate subtraction . 6-2=4 They use numberlines and practical resources to support calculation. Teachers demonstrate the use of the numberline. Children then begin to use numbered lines to support their own calculations - using a numbered line to count back in	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 with the second progress to counting in tens 34 + 20 * They will then use empty num two digit number, including a through a ten barrier. * Using number lines * Story' of 4, 5, 6, 7, 8 and 9 e.g. 7 = 7 + 0, 6 + 1, 5 + 2, 4 + 3	ones. ✓ 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. ✓ 13-5=8 The number line 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. Counting back: Children will begin to use empty number lines to support calculations. ✓ First counting back in ones. ✓ And then in tens. ✓ And then in tens. ✓ Using number facts 'Story' of 4, 5, 6, 7, 8 and 9 e.g. 'Story' of 7 is 7 - 1 = 6, 7 - 2 = 5, 7 - 3 = 4 Number bonds to 10 e.g. 10 - 1 = 9, 10 - 2 = 8, 10 - 3 = 7	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. Doubling and halving Find doubles to double 5 using fingers e.g. double 3 Doubling 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.	 Partitioning and decomposition Demonstrated by the teacher as: 	Children will continue to use arrays where appropriate leading into the grid method of multiplication.	Children should be able to:
У4	Addition ✓ Carry below the line. 625 783 367 + 48 + 42 + 85	Subtraction V Partitioning and decomposition Demonstrated by the teacher as: $\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	MultiplicationChildren will continue to use arrays where appropriate leading into the grid method of multiplication.Partitioning38 x 5 = (30 x 5) + (8 x 5) = 150 + 40 = 190Grid methodTU × 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× $\frac{70}{2}$ $\frac{2}{30}$ $\frac{2100}{60}$ $\frac{60}{16}$ × $\frac{70}{2}$ 	DivisionChildren should be able to:Use the vertical method:Short division TU + U72 + 3 $3 \overline{) 72}$ - 30 42 - 30 12 - -6 6 - 6 2x 2x 2x - -6 6 - 6 2x 4Division HTU + U 196 + 630xShort division HTU + U 196 + 630x 30x 2x 4
		Children should: Children should: Sugar bis 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. 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	✓ Children will know all times tables to 12 x 12	Answer: 32 remainder 4 or 32r 4 Any remainders should be shown as integers, i.e. 14 remainder 2 or 14 r 2. 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.

Addition	Subtraction	Multiplication	Division
Addition	Subtraction	Multiplication	Division

	Addition	Subtraction	Multiplication	Division
У5	587 3587 + 475 + 675 1062 4262 11 111 ✓ Know that decimal points should line up under each other, particularly when adding mixed amounts, e.g. 3 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 able to subtract numbers with up to 5 digits; ✓ be dable 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 al .2 .2	Writer mill learn to use the standard method of short multiplication to ThHTU x U and TU.th x U in the context of money. \checkmark Ensure 'carry overs' go under the answer line. \checkmark Th H T U 6 4 8 1 x 9 $-\frac{5 8 3 2 9}{4 7}$ \leftarrow AnswerChildren will develop the Grid method for long multiplication as below, moving on to the standard method of long multiplication when ready (see year 6):ThHTU x TU 372 x 24 Children will approximate first $372 x 24$ is approximately $400 \times 25 = 10000$ \times $\frac{300}{1200}$ 70 2 20 60000 4 1200 1200 8	Children will use the standard written method of short division to solve short division ThHTU $\pm \le 12$. Remainders could be shown as integers, i.e. 14 remainder 2 or 14 r 2 or as fractions 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. Long division ThHTU \pm TU 972 ± 36 $36 \int 972 \\ -\frac{720}{252} \\ 0 \\ -\frac{252}{0} \\ 0 \\ 0 \\ -\frac{252}{0} \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$

	Addition			Subtraction	Multiplication	Division
У6	Children should number of digits 7648 + 1486 9134 111 Using similar me ✓ add se withou ✓ known other, amoun ✓ Be abl invers	extend the carrying method to 584 <u>+ 5848</u> <u>12432</u> 111 thods, children will treral numbers with up to 6 d it a whole number component that decimal points should lim particularly when adding or ts, e.g. 401.2 + 26.85 + 0.71. e to check additions by their e operations.	42 6432 786 3 <u>+ 4681</u> <u>11944</u> 121 ligits including those we up under each subtracting mixed	Decomposition 5131 6467 - 2684 3783 Children should: Substract numbers with up to 6 of digits: Be able to subtract numbers with up to 6 of digits: Be able to subtract numbers with up to 6 of digits: Substract 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. Find the difference between a pair of numbers with different numbers of decimal places Where the numbers are involved in the calculation are close together or near to multiples of 10, 100 etc counting on using a number line should be used. 3002 - 1997 = 1005	Standard method Children should: ✓ Be able to use the standard method of long multiplication to ThHTU x TU as below 327 x 53 98_21 327 x 3 16_13_250 327 x 50 17331 327 x 50 ✓ 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 TUt x Ut by long multiplication and adjustment. E.g. change it to HTU x 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. 0 1.3 7 5 1 10.06040 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.