Division

Step 1	Examples	Step 2	Examples	Step 3	
Step 1 Concrete Sharing The first step requires the children to use objects or images to share. Language should be extended to:	Examples 6÷2= 3 15÷5=3 QQQQQQQ	Concrete Grouping The children should recognise division as grouping as well as sharing. This can be done with objects or images. Language should be extended to: How many groups of can we get out of? Remainders are expressed as 1 left,	Examples How many groups of 3 can you make with 12 strawberries? 12 ÷ 3 = 4 12 ÷ 3 = 4 16 ÷ 4 = 4 Image: I	Step 3 Grouping on a number line This step requires the child number line in relevant group Step should be extended to line and using tables known strategies. The division number sented the calculations. Remainders are referred to Remainders should be row appropriate. Example 45 - 9 = 5	dren to count on using a oups. o not using the number dedge or counting ence should be shown with o as remainders.
Step 4 Short method for ÷ O This step requires the children to carry remainders within the calculation to make it more efficient. It should be used to divide TO, HTO, ThHTO as well as decimals. Children should be taught how to express remainders as fractions. Decimal places should also be added to show remainders as decimals remainders should be rounded up or down if appropriate.	Examples $847 \div 5 = 169 r^2$ $847 \div 5 = 169 r^2$ $169 r^2$ 5834 + 7 $79 \div 5 = 15.8$ $79 \div 5 = 15.8$ $79 \div 5 = 15.8$ $579 \div 5 = 15.8$ $15 \cdot 8$ $579 \cdot 5 = 15.8$	expressed as 1 left, 2 left etc Step 5 Short method for ÷ TO This step requires the children to divide by TO. It requires the same method as step 5 although the children should be encouraged to write the tables of the divisor.	Examples $859 \div 32 = 27r9$ $0 \ 2 \ 7 \ r 9$ $32 \ 8 \ ^86 \ ^{22}9$ $32 \ 8 \ ^{8}6 \ ^{22}9$ $32 \ 8 \ ^{8}6 \ ^{22}9$	 Step 6 Formal written method of long division: Divide: how many times does the divisor fit into the number without remainder Multiply: multiply the answer by the divisor to reach the multiple needed to calculate the remainder Subtract: subtract the multiple from the original number to calculate the remainder Bring the next digit down: this replaces the 'write the remainder just before the next number' step in short division. Repeat until all parts of the number are divided. 	Examples $ \begin{array}{r} 02 12 \\ 12 2544 \\ -24 \\ 014 \\ -12 \\ \hline 02.4 \\ \end{array} $ $ \begin{array}{r} 2544 \div 12 = 212 \\ 2544 \div 12 = 212 \\ \hline 02.4 \\ \hline 034 \\ -24 \\ \hline 034 \\ 274 \div 4 = 68.5 \\ \hline 02 \\ \hline \end{array} $

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