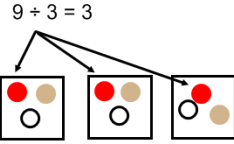

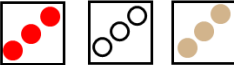
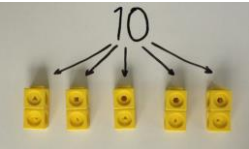
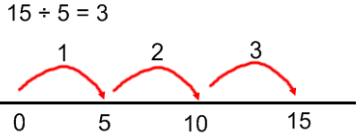
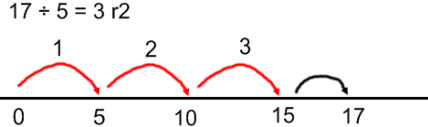
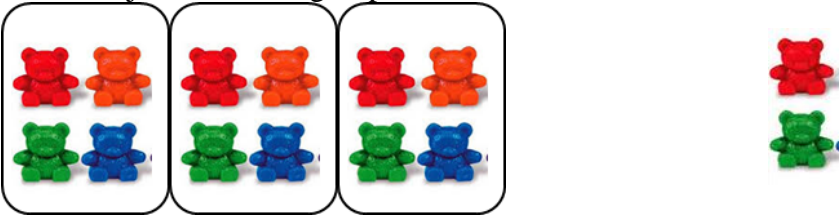


÷ Division ÷

This shows the progression of teaching division. Each method is designed to lead on to the next gradually building up children's understanding of number. Remember, children should think about whether a calculation can be done mentally first.

STEP	Activity	Strategy	Comments
1 Sharing	Counting in groups.	<p>SHARING 'Is it fair?'</p>  	<p>USE COUNTERS OF DIFFERENT COLOURS</p> <p>When sharing you know how many groups you will have; you are working out how many will be in each group.</p> <p>Don't 'over - teach' sharing!</p> <p>Focus more on grouping</p>
2 Grouping	<p>Times tables facts.</p> <p>Times table bingo</p>	<p>As GROUPING – link to times tables facts</p> <p>$12 \div 4 = 3$ (groups)</p> <p>$9 \div 3 = 3$</p>  <p>Divide quantities into equal groups. Use cubes, counters, objects or place value counters to aid understanding.</p>  <p>Link division to multiplication through Number Families.</p> <p>Eg $15 \div 3 = 5$ $5 \times 3 = 15$ $15 \div 5 = 3$ $3 \times 5 = 15$</p>	<p>When solving division through grouping, you know how many items are in each group; you are working out how many groups there will be.</p> <p>As this relies more on times tables knowledge, it is better to use this strategy than sharing. Children should understand that even when solving a 'sharing' problem, they can solve it quicker through grouping.</p>

<p>3</p> <p>Grouping on the number line</p>	<p>Times tables facts.</p> <p>Times table bingo</p>	<p>Grouping using number line</p> <p>$15 \div 5 = 3$</p> 	<p>Encourage children to read the question as:</p> <p><i>'I have 15, how many 5s?'</i></p> <p>They can then use times tables knowledge to solve the problem, using number lines to record their thinking.</p>
<p>4</p> <p>Grouping on the number line with remainders</p>	<p>Interactive games</p>	<p>Finding a remainder $17 \div 5 = 3 \text{ r } 2$</p>  <p>$14 \div 3 =$</p> <p>Divide objects between groups and see how much is left over</p> 	<p>Encourage children to read the question as:</p> <p><i>'I have 17, how many 5s?'</i></p> <p>How many WHOLE groups of 5 can they count in 17?</p> <p>What's left over? <i>This is the remainder.</i></p>
<p>5</p> <p>Further partitioning to solve $TO \div 0$</p>	<p>Practice 'further partitioning'</p>	<p>$TO \div 0$: Use multiplication facts</p> <p>$64 \div 4 =$</p> <p>$10 \times 4 = 40$</p> <p>$5 \times 4 = 20$ SO $16 \times 4 = 64 / 64 \div 4 = 16$</p> <p>$1 \times 4 = 4$</p>	<p>Further partitioning allows children to break a large number down so that they can use known multiplication facts to help solve the division.</p> <p>As we are dividing by 4 we want to find a large number divisible by 4 by further partitioning.</p> <p>(40 is the key number and this is ten groups of 4)</p>

			Eventually further partitioning may not be necessary as children become more confident seeing the multiplication facts they can use.
6 Standard method	Times tables rapid recall	<p>Standard 'Goes Into' Method</p> $ \begin{array}{r} 14 \text{ r } 2 \\ \hline 5 \overline{) 72} \\ \underline{35} \\ 37 \\ \underline{35} \\ 2 \end{array} $ <p>Then</p> $ \begin{array}{r} 164 \text{ r } 3 \\ \hline 6 \overline{) 987} \\ \underline{12} \\ 38 \\ \underline{36} \\ 27 \\ \underline{24} \\ 3 \end{array} = 164 \underline{3} $ <p>$432 \div 15$ becomes</p> $ \begin{array}{r} 28 \text{ r } 12 \\ \hline 15 \overline{) 432} \\ \underline{30} \\ 13 \\ \underline{12} \\ 12 \\ \underline{12} \\ 0 \end{array} $ <p>Answer: 28 remainder 12</p> <p>$432 \div 15$ becomes</p> $ \begin{array}{r} 28 \\ \hline 15 \overline{) 432} \\ \underline{30} \\ 13 \\ \underline{12} \\ 12 \\ \underline{12} \\ 0 \end{array} $ <p>$\frac{12}{15} = \frac{4}{5}$</p> <p>Answer: 28 $\frac{4}{5}$</p> <p>$432 \div 15$ becomes</p> $ \begin{array}{r} 28.8 \\ \hline 15 \overline{) 432.0} \\ \underline{30} \\ 13 \\ \underline{12} \\ 12 \\ \underline{12} \\ 0 \end{array} $ <p>Answer: 28.8</p>	Using the standard 'goes into' method allows children to use known multiplication facts mentally and reduce the jottings needed to record their thoughts.

<p>8 Decimal Divisions</p>	<p>Decimal place value Times tables rapid recall</p>	<p>With decimals: Use standard method</p> $87.5 \div 7 =$ $ \begin{array}{r} 12.5 \\ 7 \overline{) 87.5} \\ \underline{7} \\ 17 \\ \underline{14} \\ 35 \\ \underline{35} \\ 0 \end{array} $	<p>More able could put answer to calculation on left as 12.5, they'd notice that 3.5 is half of 7.</p>
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