

Progression in written calculation strategies for division

(Examples indicate end of year expectations)

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p style="text-align: center;"><u>Statutory Guidance</u></p> <p>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally</p> <p>e.g. describing pattern of add and even</p> <p>e.g. 6 sweets shared equally between 3 friends</p>	<p style="text-align: center;"><u>Statutory Guidance</u></p> <p>Solve one-step problems involving division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.</p> <p style="text-align: center;"><u>Possible representations</u></p> <p style="text-align: center;">Sharing</p> <p>How many apples are in each bowl if I share 6 apples between three bowls?</p> <p style="text-align: center;">Grouping</p> <p>Put these counters into groups of two. How many groups are there?</p> <p style="text-align: center;"><u>Non- statutory guidance</u></p> <p>They make connections between arrays, number patterns, and counting in twos, fives and tens.</p> <p>(with the support of the teacher)</p>	<p style="text-align: center;"><u>Statutory Guidance</u></p> <p>Solve problems involving division, using materials, arrays, repeated addition, mental methods, and division facts, including problems in contexts.</p> <p style="text-align: center;"><u>Possible representations</u></p> <p>e.g. $15 \div 5 =$</p> <p>Counting up on a number line.</p> <p style="text-align: center;">Using arrays</p> <p style="text-align: center;"><u>Non- statutory guidance</u></p> <p>They connect unit fractions to equal sharing and grouping, to numbers when they can be calculated, and to measures, finding fractions of lengths, quantities, sets of objects or shapes.</p>	<p style="text-align: center;"><u>Statutory Guidance</u></p> <p>Write and calculate mathematical statements for division using the multiplication tables that they know.</p> <p>Division facts include: 2,3,4,5,8 and 10.</p> <p>e.g. $24 \div 8 =$</p> <p style="text-align: center;"><u>Possible representations</u></p> <p>Put 24 apples into 8 equal groups.</p> <p>$46 \div 2 =$ <input type="text"/></p> <p style="text-align: center;"><u>Non- statutory guidance</u></p> <p>Use known division facts to derive related facts. e.g. If I know that $24 \div 8 = 3$, then... $240 \div 8 = 30$</p>	<p style="text-align: center;"><u>Statutory Guidance</u></p> <p>No reference to written division calculations.</p> <p>Children continue to relate division to known multiplication facts (up to 12×12)</p> <p style="text-align: center;"><u>Possible representations</u></p> <p>$63 \div 3 =$ <input type="text"/></p> <p style="text-align: center;"><u>Non- statutory guidance</u></p> <p>Use known division facts to derive related facts. e.g. If I know that $24 \div 8 = 3$, then... $240 \div 8 = 30$</p>	<p style="text-align: center;"><u>Statutory Guidance</u></p> <p>Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.</p> <p>Place value counters are useful representations when regrouping is required e.g. $3642 \div 3$</p> <p style="text-align: center;"><u>Non- statutory guidance</u></p> <p>Use known division facts to derive related facts. e.g. If I know that $24 \div 8 = 3$, then... $240 \div 8 = 30$</p>	<p style="text-align: center;"><u>Statutory Guidance</u></p> <p>Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Long division e.g. $432 \div 15$</p> <p>$432 \div 15$ becomes</p> $\begin{array}{r} 28 \\ 15 \overline{) 432} \\ \underline{30 } \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$ <p>And short division are statutory requirements $496 \div 11$ becomes</p> $\begin{array}{r} 45 \text{ r } 1 \\ 11 \overline{) 496} \\ \underline{44} \\ 56 \\ \underline{55} \\ 1 \end{array}$ <p>Answer: $45 \frac{1}{11}$</p>