

Key Stage 1 – Division

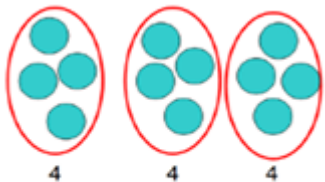
Y1

Through practical activities in meaningful contexts.

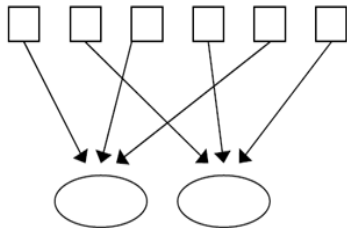
- Division as sharing.

Emphasise the importance of sharing equally.

Share a bag of 15 sweets between 5 children – one for you, one for you, one for you, one for you, one for me.



12 shared between 3 is 4



This is an important stage in teaching the difference between grouping and sharing.

- Introduce halving even numbers up to 10.

Half of 4



National Curriculum requirements:

Solve one step problems involving division, by calculating the answer by using concrete objects, pictorial representations and arrays with the support of the teacher.

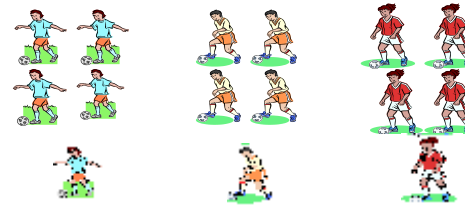
Y2

Through practical activities in meaningful contexts.

- Recall and use division facts for 2, 5 and 10 times tables.
- Continue to use division as sharing.
- Division as grouping.

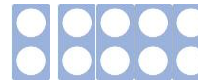


- 15 children get into teams of 5 to play a game. How many teams are there?



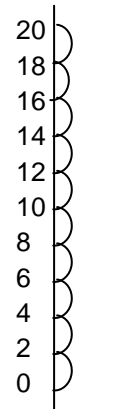
How many groups of 5 in 15?

How many 5's have been counted?



- How many 2's in 10?

- Understand ' $\div 2$ ' as 'half of'.
- Understand that division is not commutative.
- Recognise relationship between \times and \div
- Record using division (\div) and equals ($=$) signs.
- Use number lines to answer questions such as $20 \div 2 =$



National Curriculum requirements:

Solve problems involving division using materials, mental methods and division facts.

Key Stage 2 – Division

Y3

- Recall and use division facts for 3, 4, and 8 times tables.
- Continue with repeated subtraction on a number line.
- Write and calculate mathematical statements for division using the tables they know.
- Introduce grouping method before short division, encourage children to estimate answers before attempting calculation. Create fact box to encourage efficient grouping e.g. not always groups of 10 - 1x, 2x, 5x, 10x, 20x, 50x, 100x.

$$\begin{array}{r}
 \underline{13} \\
 5 \overline{) 65} \\
 \underline{- 50} \quad (5 \times 10) \\
 15 \\
 \underline{- 15} \quad (5 \times 3) \\
 \underline{0}
 \end{array}$$

- Introduce short division, with exact answers.

$$\begin{array}{r}
 \begin{array}{|c|c|} \hline 3 & 2 \\ \hline \end{array} \\
 3 \overline{) 96}
 \end{array}$$

- Progressing to short division involving carrying, with exact answers.

National Curriculum requirements:

Division questions based on multiplication tables they know.

Divide 2 digits by 1 digit, progressing to formal written methods.

The National Curriculum statutory requirements for Year 3 and the use of written methods are not clear therefore our guidance for Year 3 has been based on the skills required to access Year 4 statutory requirements.

Y4

- Recall and use all division facts for all tables up to 12 (Including dividing by 1).
- Continue with short division method.

$$\begin{array}{r}
 \begin{array}{|c|c|} \hline 1 & 8 \\ \hline \end{array} \\
 4 \overline{) 72}
 \end{array}
 \quad
 \begin{array}{r}
 \begin{array}{|c|c|c|} \hline 0 & 3 & 7 \\ \hline \end{array} \\
 5 \overline{) 185}
 \end{array}
 \quad
 \begin{array}{r}
 \begin{array}{|c|c|c|} \hline 2 & 1 & 8 \\ \hline \end{array} \\
 4 \overline{) 872}
 \end{array}$$

- Progressing to short division with remainders.

$ \begin{array}{r} \begin{array}{ c c c } \hline 2 & 0 & 4 \\ \hline \end{array} \\ 4 \overline{) 816} \end{array} $	$ \begin{array}{r} \begin{array}{ c c c } \hline 1 & 4 & 1 \text{ r}1 \\ \hline \end{array} \\ 3 \overline{) 424} \end{array} $
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National Curriculum requirements:

Divide 2 digits by 1 digit and 3 digits by 1 digit becoming fluent with formal written method of short division with exact answers and progressing to remainders.

The National Curriculum statutory requirements for Year 4 and the use of written methods are not clear therefore our guidance for Year 4 has been based on the skills required to access Year 5 statutory requirements.

Key Stage 2 – Division

Y5

- Consolidate the use of the formal written method of short division.

$$\begin{array}{r} 0663r5 \\ 8 \overline{)5350^29} \end{array}$$

National Curriculum requirements:

Divide 2 digits by 1 digit.
Divide 3 digits by 1 digit.
Divide 4 digits by 1 digit.

Children interpret the remainders appropriately for the context.
e.g. as fractions, decimals or by rounding
 $98 \div 4 = 98/4 = 24r2 = 24 \frac{1}{2} = 24.5$ rounded to 25

Divide whole numbers and those involving decimals by 10, 100, 1000.

Y6

- Consolidate short division.
- Children should be able to interpret remainders as whole number remainders, fractions or by rounding, as appropriate for the context.

$98 \div 7$ becomes

$$\begin{array}{r} 14 \\ 7 \overline{)98} \end{array}$$

- Answer: 14

$432 \div 5$ becomes

$$\begin{array}{r} 86r2 \\ 5 \overline{)432} \end{array}$$

Answer: 86 remainder 2

$496 \div 11$ becomes

$$\begin{array}{r} 45r1 \\ 11 \overline{)496} \end{array}$$

Answer: $45 \frac{1}{11}$

- Introduce long division.

$432 \div 15$ becomes

$$\begin{array}{r} 28r12 \\ 15 \overline{)432} \\ \underline{300} \\ 132 \\ \underline{120} \\ 12 \end{array}$$

Answer: 28 remainder 12

$432 \div 15$ becomes

$$\begin{array}{r} 28 \\ 15 \overline{)432} \\ \underline{300} \\ 132 \\ \underline{120} \\ 12 \end{array}$$

$$\frac{12}{15} = \frac{4}{5}$$

Answer: $28 \frac{4}{5}$

$432 \div 15$ becomes

$$\begin{array}{r} 28.8 \\ 15 \overline{)432.0} \\ \underline{300} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$$

Answer: 28.8

N.B: The above examples are taken from the National Curriculum for Mathematics appendix.

National Curriculum requirements:

Divide numbers up to 4 digits by a 2 digit number using the formal written method of short division where appropriate.

Divide up to 4 digits by a 2 digits whole number using the formal written method of long division.