

# Key Stage 1 – Division

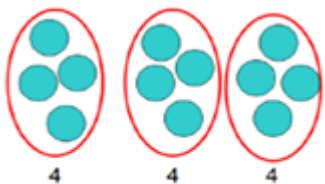
## Y1

Through practical activities in meaningful contexts.

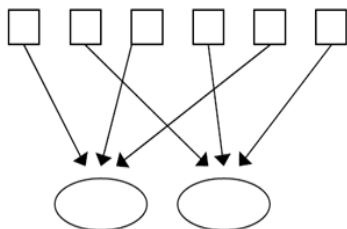
- Division as sharing.

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.

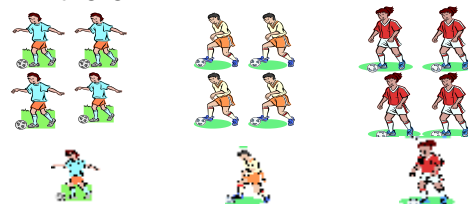
## Y2

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.

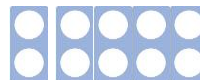


- 15 children get into teams of 5 to play a game. How many teams are there?



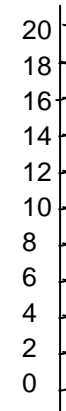
How many groups of 5 in 15?

How many 5's have been counted?



- How many 2's in 10?

- Understand '÷ 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 vertical 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.

$$\begin{array}{r} \underline{32} \\ 3 \overline{) 96} \end{array}$$

- 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.

$$4 \overline{) 732}$$

$$5 \overline{) 185}$$

$$4 \overline{) 872}$$

- Progressing to short division with remainders.

$$4 \overline{) 816}$$

$$3 \overline{) 424} \text{ r}1$$

#### 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.