



Wester Overton Primary School

Parents Guide to Division



Your child is now learning about division. In order for you to help at home it is important that you are familiar with the words and methods your child's teacher will be using in the classroom.

Progression through mental calculations for division

Doubling and halving

Knowing that halving is dividing by 2

Deriving and recalling division facts

should be practiced every day from P3 onward.

Primary 3 2 times table
 3 times table
 4 times table
 5 times table
 10 times table

Primary 4 2 times table
 3 times table
 4 times table
 5 times table
 8 times table
 9 times table
 10 times table

Primary 5 Derive and recall division facts for all tables up to 10×10

Primary 6/7 Derive and recall quickly division facts for all tables up to 10×10

Using and applying division facts

Children should be able to apply their tables knowledge to derive other facts.

e.g. If I know $3 \times 7 = 21$, what else do I know?

$30 \times 7 = 210$, $300 \times 7 = 2100$, $3000 \times 7 = 21\ 000$, $0.3 \times 7 = 2.1$ etc

Dividing by 10 or 100

Knowing that the effect of dividing by 10 is a shift in the digits one place to the right.

Knowing that the effect of dividing by 100 is a shift in the digits two places to the right.

Use of factors

$$378 \div 21$$

$$378 \div 3 = 126$$

$$378 \div 21 = 18$$

$$126 \div 7 = 18$$

Use related facts

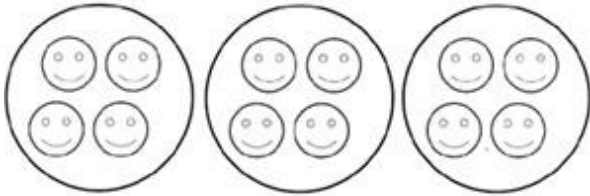
Given that $1.4 \times 1.1 = 1.54$

What is $1.54 \div 1.4$, or $1.54 \div 1.1$?

These mental calculations are the foundations of your child's number knowledge, and will be continued to be used throughout their school career and in life.

Equal Sharing and Grouping

Firstly the children are introduced to the concept of sharing. Children will understand equal groups by sharing items out in play and problem solving. They will count in 2s and 10s and later in 5s.

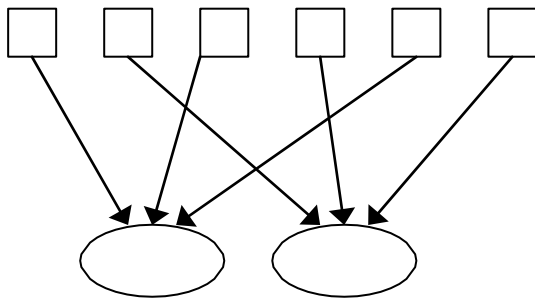


This is achieved through a series of practical lessons where the answers are given orally. The practical examples have no remainders at this stage.

Equal Sharing

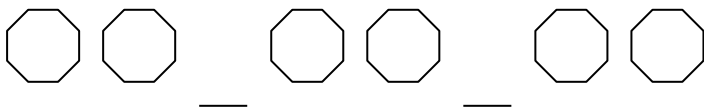
Share 6 sweets equally between two boys. How many does each receive?

The answer is found by sharing the apples, giving one to each alternately until none are left, and then counting how many are in each share.



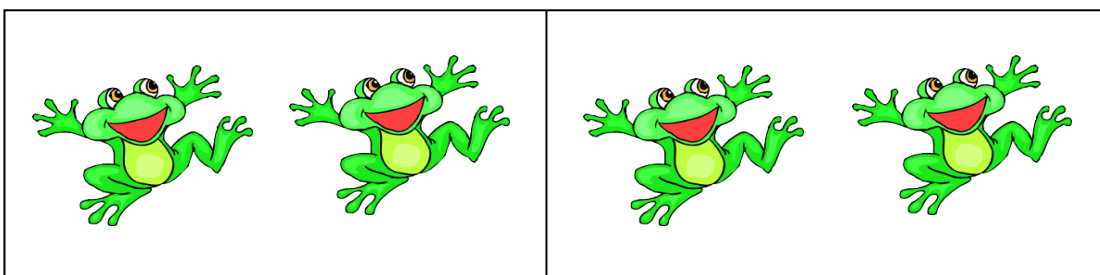
Grouping, or repeated subtraction

There are 6 sweets, how many people can have 2 sweets each?



Introducing the division symbol

Having carried out practical sharing activities it is now explained how this can be written using symbols.



"4 frogs **shared equally** among 2 plates gives 2 frogs on each plate"

ie: 4 divided by 2 = 2

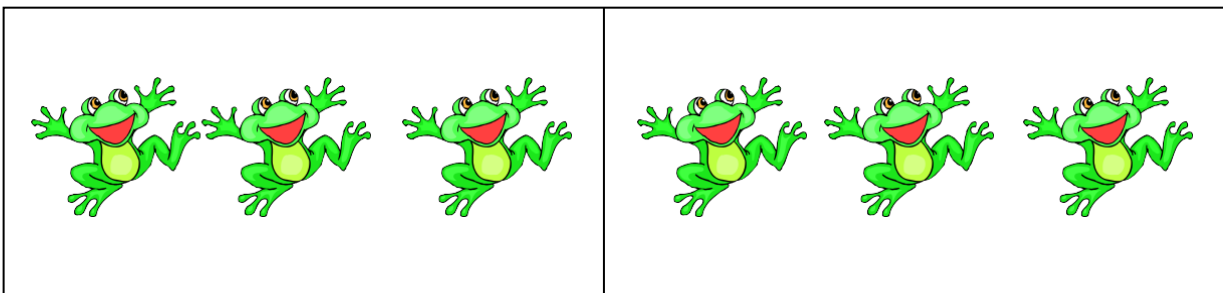
Divide means shared equally. The pupils would then record examples using the division symbol. 4

$\div 2 = 2$

Sharing with remainders

The children would firstly be introduced to division with remainders through practical tasks, using concrete materials.

"Share 7 frogs between 2 ponds. How many frogs in each pond?"



The children would then place 1 frog in each pond until there are not enough frogs left to give another 1 frog to each pond. Say "7 frogs shared equally among 2 ponds gives 3 to each pond with one frog left over". It would then be explained that the number left over is called the remainder.

"7 shared equally among 2 is 3 remainder 1"

7 divided by 2 = 3 r 1

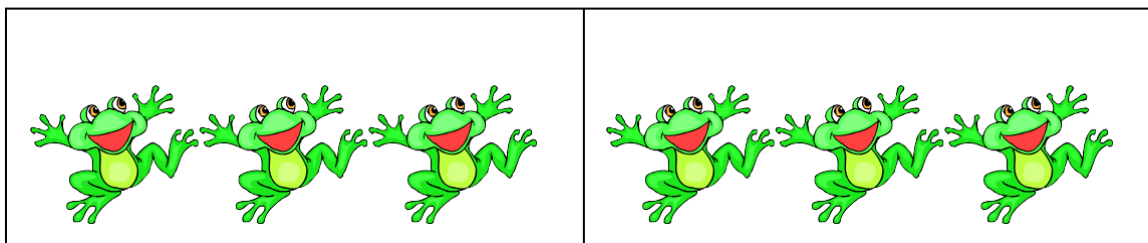
Further examples would then be used to reinforce the use of a remainder. The children would be asked to verbalise the questions using sharing language.

Linking division and multiplication

The link between division and multiplication should firstly be shown practically.

"share 6 frogs equally between 2 ponds" 6 divided by 2 = 3

$$2 \times 3 = 6$$

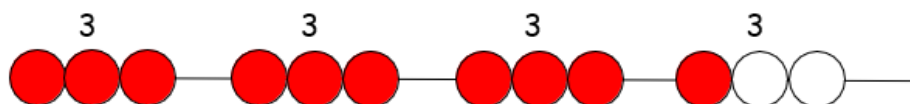
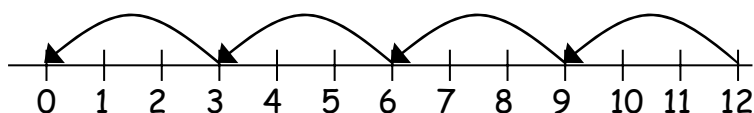


Many more practical activities would then be undertaken to highlight the link between division and multiplication. The children will be asked further questions such as:

6 divided by 2 is the same as 2 lots of what?

Repeated subtraction using a number line

$$12 \div 3 = 4$$



Using beads will help children with interpreting division calculations such as $10 \div 5$ as 'how many 5s make 10?'

Using symbols

Children will begin to use symbols to stand for unknown numbers to complete equations using inverse operations

$$\square \div 2 = 4$$

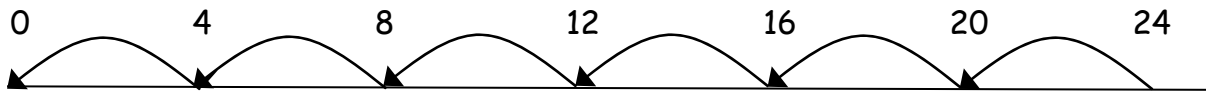
$$20 \div \square = 4$$

$$\square \div \square = 4$$

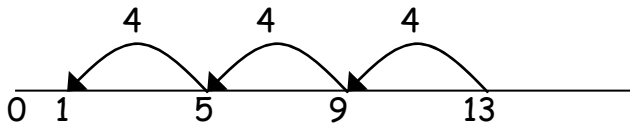
Grouping (P4 upward)

From P4, the emphasis is on **grouping** rather than sharing. Children will continue to use repeated subtraction using a number line.

Children will use an empty number line to support their calculation. $24 \div 4 = 6$



Children should also move onto calculations involving remainders. $13 \div 4 = 3 \text{ r } 1$



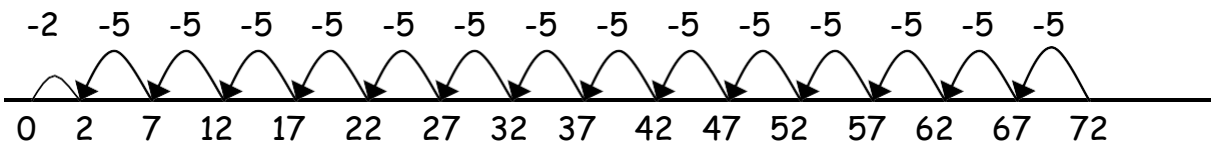
Children will also continue to use symbols to stand for unknown numbers to complete equations using inverse operations

$$26 \div 2 = \square \qquad 24 \div \square = 12 \qquad \square \div 10 = 8$$

Written Calculations

Children will develop their use of repeated subtraction to be able to subtract multiples of the divisor. Initially, these should be multiples of 10s, 5s, 2s and 1s- numbers with which the children are more familiar.

$72 \div 5$



Recording Calculations

It would also be explained that a division need not necessarily be written using the division symbol. For example 6 divided by 2 is sometimes written as

$$\underline{2} \overline{) 6}$$

This form of recording is generally used for larger numbers, beyond the multiplication tables. The answer should always be correctly placed in either the tens or units column.

This parent guide has been produced to help inform and involve you in the working of the school and in your child's learning.

Only when families and school work together in partnership can we ensure the best for your child. Information from the school is only one part of this, and our willingness to answer your questions and listen to suggestions provides the other crucial part of this partnership.

Should you wish further information, please contact me at the school.

June Moir
Head Teacher

