
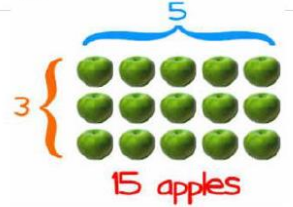

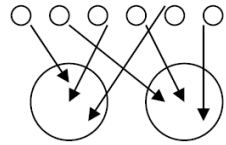


Year 1 and 2 Division	
Year 1	Year 2
<p>Mental Strategies Children should experience regular counting on and back from different numbers in 1s and in multiples of 2, 5 and 10. Children must have secure counting skills- being able to confidently count in 2s, 5s and 10s. Children should be given opportunities to reason about what they notice in number patterns. They should begin to recognise the number of groups counted to support understanding of relationship between multiplication and division.</p>  <p> $2 + 2 + 2 + 2 + 2 = 10$ $2 \times 5 = 10$ 2 multiplied by 5 5 pairs 5 hops of 2 </p> <p>Group AND share small quantities- understanding the difference between the two concepts. Sharing – 6 sweets are shared between 2 people. How many do they have each? Sharing using concrete apparatus, pictorial and abstract</p>	<p>Mental Strategies Children should count regularly, on and back, in steps of 2, 3, 5 and 10. Children who are able to count in twos, threes, fives and tens can use this knowledge to work out other facts such as 2×6, 5×4, 10×9. Know and understand sharing and grouping- introducing children to the \div sign. Children should continue to use grouping and sharing for division using practical apparatus, arrays and pictorial representations. Children should use jottings alongside the abstract to show their understanding.</p>  <p> $5 \times 3 = 15$ $3 \times 5 = 15$ </p> <p>Division with arrays</p> <p>Link division to multiplication by creating an array and thinking about the number sentences that can be created. Eg $15 \div 3 = 5$ $5 \times 3 = 15$ $15 \div 5 = 3$ $3 \times 5 = 15$</p>  <p>To recognise the dividend of 15 and the associated division facts such as: $15 \div 3 = 5$ It is essential that children use jottings to draw around their equal groups to show accurate representations of the number sentence.</p>

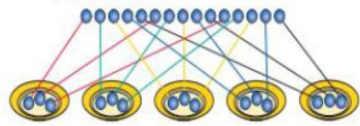
<p>Sharing objects into groups</p> <p>I have 10 cubes, can you share them equally in 2 groups?</p> <p>Children use pictures or shapes to share quantities.</p> <p style="text-align: center;">Share 9 buns between three people.</p> <p style="text-align: center;">$9 \div 3 = 3$</p> <p>They should use objects to group and share amounts to develop understanding of division in a practical sense. They should use jottings alongside the abstract to show their understanding.</p> <p>E.g. using counters to find out how many 5's are in 30? How many pairs of gloves if you have 12 gloves?</p> <p>Record sharing by using pictorial notation</p> <p><i>There are 6 cakes and 2 children. How many cakes will they each get?</i> One for you and one for you.</p>	<p>Draw an array and use lines to split the array into groups to make multiplication and division sentences.</p> <p>Find the inverse of multiplication and division sentences by creating four linking number sentences.</p> <p> $5 \times 3 = 15$ $3 \times 5 = 15$ $15 \div 5 = 3$ $15 \div 3 = 5$ </p> <p>Know and understand sharing and grouping- introducing children to the \div sign.</p> <p>Children should continue to use grouping and sharing for division using practical apparatus, arrays and pictorial representations. Children should use jottings alongside the abstract to show their understanding.</p> <p>15 pencils shared between 3 pots, how many in each pot?</p> <p>Pat has no more than 20 sweets in a bag.</p> <p>She counts her sweets in groups of two. She has one left over. Then she counts her sweets in groups of five. She has 2 left over. How many sweets could Pat have? Is there another answer?</p>
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5 hops in 15. How big is each hop?

Develops importance of one-to-one correspondence.

$15 \div 5 = 3$
15 shared between 5



Jottings should be used alongside the abstract to show their understanding.

Children should be taught to share using concrete apparatus.

Grouping
Children should apply their counting skills to develop some understanding of grouping.



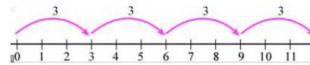
Use of arrays as a pictorial representation for division.
 $15 \div 3 = 5$ There are 5 groups of 3.
 $15 \div 5 = 3$ There are 3 groups of 5.

Divide quantities into equal groups. Use cubes, counters, objects or place value counters to aid understanding.

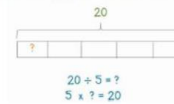
Grouping



Use a number line to show jumps in groups. The number of jumps equals the number of groups.



Think of the bar as a whole. Split it into the number of groups you are dividing by and work out how many would be within each group.



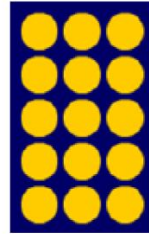
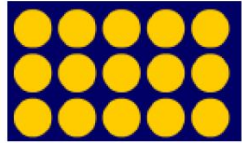
$28 \div 7 = 4$

Divide 28 into 7 groups. How many are in each group?

Use the number line to show jumps in groups. Each jump up is an equal group. How many equal groups of 3 are there in 15?

The bar model should be used as a visual representation to show division as equal groups.

This should show how to use the bar method to show division as equal grouping. Should reflect the above images.

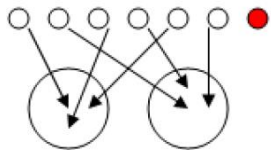


Children should be able to find $\frac{1}{2}$ and $\frac{1}{4}$ and simple fractions of objects, numbers and quantities.

Children should begin to explore finding simple fractions of objects, numbers and quantities.

E.g. 16 children went to the park at the weekend. Half that number went swimming. How many children went swimming?

There are 7 cakes and 2 children. How many cakes will they each get? 'Leftovers' introduced.



Can I do inverse calculations?

8, 2, 16

$$8 \times 2 = 16$$

$$2 \times 8 = 16 \quad \checkmark$$

$$16 \div 8 = 2$$

$$16 \div 2 = 8 \quad \checkmark$$

9, 10, 90

$$9 \times 10 = 90$$

$$10 \times 9 = 90 \quad \checkmark$$

$$90 \div 10 = 9$$

$$90 \div 9 = 10 \quad \checkmark$$

3, 5, 15

$$3 \times 5 = 15$$

$$5 \times 3 = 15 \quad \checkmark$$

$$15 \div 5 = 3$$

$$15 \div 3 = 5 \quad \checkmark$$

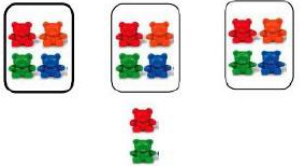
\div = signs and missing numbers

$6 \div 2 = \square$	$\square = 6 \div 2$
$6 \div \square = 3$	$3 = 6 \div \square$
$\square \div 2 = 3$	$3 = \square \div 2$
$\square \div \nabla = 3$	$3 = \square \div \nabla$

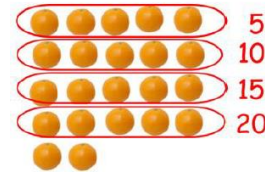
Pupils to recognise when a dividend will leave a remainder, for example, $14 \div 3$.

14 ÷ 3 =
 Divide objects between groups and see how much is left over

Division with a remainder:



$$22 \div 5 = 4 \text{ r } 2$$



There are 4 bags. Each bag contains 5 oranges and 2 oranges are left over.

Children should use jottings alongside the abstract to show their understanding. They must understand that the remainder must be less than the divisor or you would be able to make another equal group.



Which is greater, the divisor or the remainder? Explain your thinking. Use < > symbols.


Remainder



Divisor

$$22 \div 5 = 4 \text{ r } 2$$

The remainder must be less than the divisor.



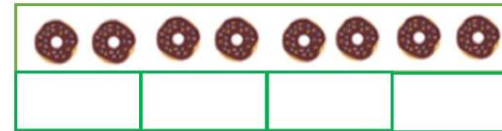
Children should be given opportunities to find a half, a quarter and a third of shapes, objects, numbers and quantities. Finding a fraction of a number of objects to be related to **grouping**. Jottings are essential to build conceptual understanding.

Jottings to use bar model concept.

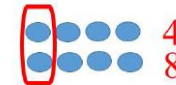
Tom needs to give one quarter of his eight cookies to his friend.
What is $\frac{1}{4}$ of 8 cookies?

The whole is divided into () equal parts.

$$8 \div 4 =$$



$\frac{1}{4}$ of eight is _____.

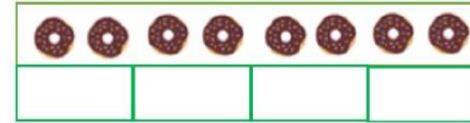


Children should find the unit fraction first and understand this concept before moving onto non-unit fractions. Example below. Some children will be able to see the relationship between one quarter of an amount and three quarters of the same amount.

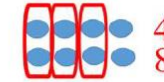
Tom needs to give one quarter of his eight cookies to his friend.
 What is (three, one quarters) $\frac{3}{4}$ of 8 cookies?

The whole is divided into () equal parts.

$$8 \div 4 =$$



$\frac{1}{4}$ of eight is _____.



What is $\frac{3}{4}$ of eight?

They will explore visually and understand how some fractions are equivalent – e.g. two quarters is the same as one half.

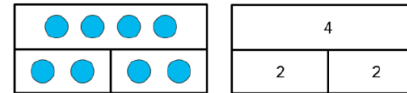
Teachers should use pictorial representations first.
 24 is divided equally into 3 groups.

24		
8	8	8

$\frac{1}{2}$ (half) of 4 =

$$4 \div 2 =$$

What is the number sentence?



Half of 4 is equal to 2.

Double 2 is equal to 4.

$\frac{1}{2}$ (half) of 50 =

What is the number sentence?

