

DIVISION $\div$

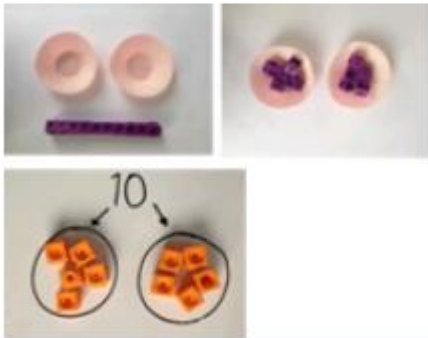
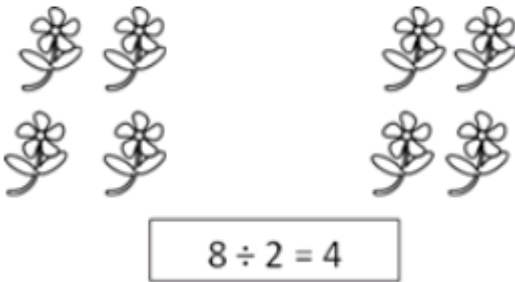
Year 1

Statutory requirements

Pupils should be taught to:

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

Key vocabulary: share, share equally, one each, two each, group, groups of, lots of, array

Concrete	Pictorial	Abstract
<p>I have 10 cubes, can you share them equally in 2 groups?</p>  <p>The image shows two photographs. The top one shows two small pink bowls, each containing five purple cubes. The bottom one shows two small pink bowls, each containing five orange cubes. A number '10' is written above the bowls with arrows pointing to each, indicating the total number of cubes.</p>	<p>Children use pictures or shapes to share quantities.</p>  <p>The image shows two groups of four line-drawn flowers. Below the flowers is a box containing the equation $8 \div 2 = 4$.</p>	

DIVISION ÷

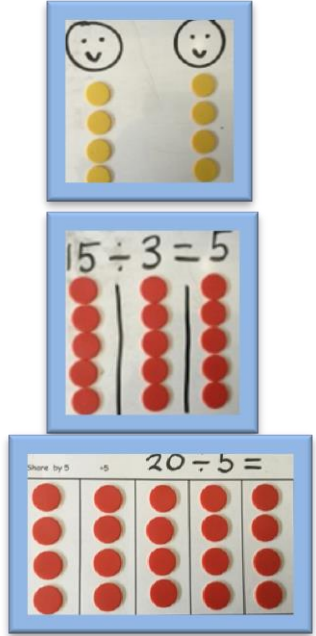
Year 2

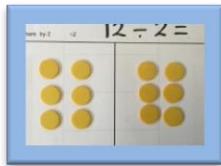
Statutory requirements

Pupils should be taught to:

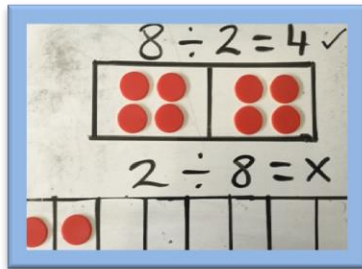
- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for division and write them using the division (÷) and equals (=) signs
- show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

Key vocabulary: share, share equally, one each, two each, group, groups of, lots of, array, **divide, divided by, divided into, division, grouping, left, left over**

Concrete	Pictorial	Abstract
<p>To use concrete apparatus to share equally between groups. Dividing in groups of 2, 5 and 10. Using the divide and equals sign</p> 	<p>1. You have 20 sweets.</p>  <p>How many sweets will each child have if you share them equally between...</p> <p>2 children _____</p> <p>5 children _____</p> <p>10 children _____</p> <p>2. You have 10 cakes.</p>  <p>How many cakes will each child have if you share them equally between</p> <p>2 children _____</p> <p>5 children _____</p> <p>10 children _____</p>	$15 \div 3 = 5$ $20 \div 5 = 4$ $12 \div 2 = 6$ <p>Leading to using known facts and inverse operations.</p> $15 \div \boxed{} = 3$



Show that multiplication of two numbers can be done in any order and that division of one number by another cannot.



Do these calculations have the same answer?

Write **yes** or **no** next to each box.

One is done for you.

yes or no?
 $8 + 2$ and $2 + 8$ yes

8×2 and 2×8 _____

$8 - 2$ and $2 - 8$ _____

$8 \div 2$ and $2 \div 8$ _____

DIVISION ÷

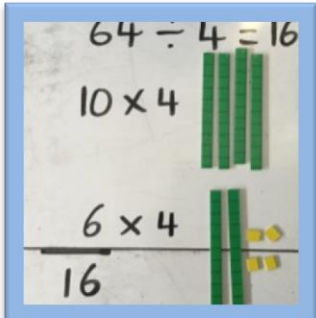
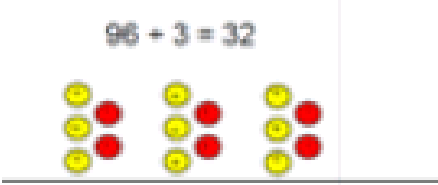
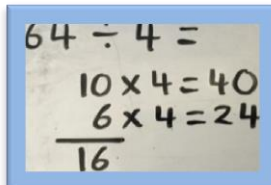
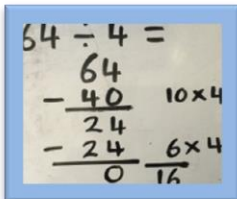
Year 3

Statutory requirements

Pupils should be taught to:

- recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- write and calculate mathematical statements for division using mental and progressing to formal written methods

Key vocabulary: share, share equally, one each, two each, group, groups of, lots of, array, divide, divided by, divided into, division, grouping, left, left over, **inverse**, **short division**, **carry**, **remainder**, **multiple**

Concrete	Pictorial	Abstract
<p>Children to use multiplication facts for the 3, 4 and 8 multiplication tables to mentally calculate division calculations. When progressing to formal methods children use Base 10 to support understanding.</p> 	<p>Moving to using place value counters to aid understanding.</p> 	<p>Children to progress to an abstract method using the chunking method.</p>  

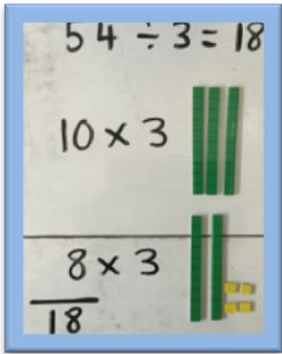
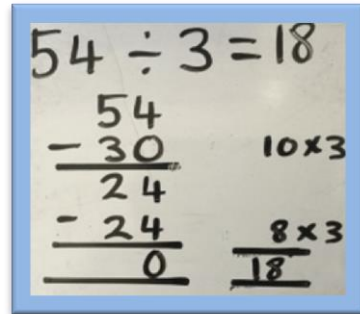
DIVISION ÷

Year 4

Statutory requirements

- There are no formal statutory requirements linked to division in Year 4.

Key vocabulary: share, share equally, one each, two each, group, groups of, lots of, array, divide, divided by, divided into, division, grouping, left, left over, **inverse**, **short division**, **carry**, **remainder**, **multiple**

Concrete	Pictorial	Abstract
<p>Children to consolidate the chunking method for division using Base 10 to support understanding.</p> 		<p>Children to consolidate using the chunking method.</p> 

DIVISION

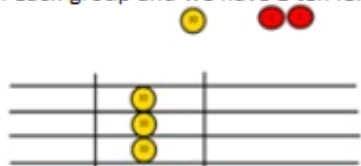
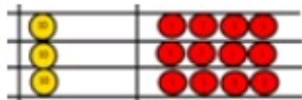
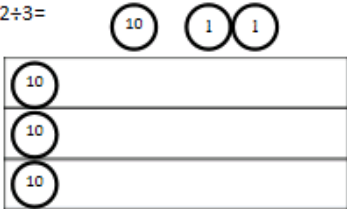
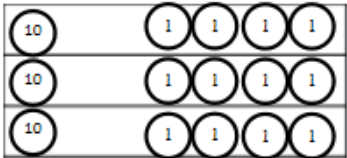
Year 5

Statutory requirements

Pupils should be taught to:

- 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.

Key vocabulary: share, share equally, one each, two each, group, groups of, lots of, array, divide, divided by, divided into, division, grouping, left, left over, inverse, short division, carry, remainder, multiple, **divisible by, factors, prime number, prime factors, composite number**

Concrete	Pictorial	Abstract
<p>$42 \div 3 =$</p> <p>Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.</p>  <p>have 1 ten left over. We exchange this ten for ten ones and then share the ones equally among the groups.</p>  <p>We look how much in 1 group so the answer is 14.</p>	<p>Encourage them to move towards counting in multiples to divide more efficiently.</p> <p>$42 \div 3 =$</p>  	<p>Moving to the formal bus stop method:</p> $42 \div 3 =$ $\begin{array}{r} 14 \\ 3 \overline{) 42} \end{array}$ <p>Moving to upto 4 digit numbers.</p> $252 \div 7 = 36$ $\begin{array}{r} 36 \\ 7 \overline{) 252} \end{array}$ $256 \div 7 = 36 \text{ r } 4$ $\begin{array}{r} 36 \text{ r } 4 \\ 7 \overline{) 2546} \end{array}$

DIVISION

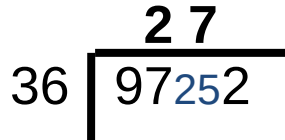
Year 6

Statutory requirements

Pupils should be taught to:

- 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

Key vocabulary: share, share equally, one each, two each, group, groups of, lots of, array, divide, divided by, divided into, division, grouping, left, left over, inverse, short division, carry, remainder, multiple, divisible by, factors, prime number, prime factors, composite number, common factor

Concrete	Pictorial	Abstract
		$972 \div 36 = 27$ 

$$977 \div 36 = 27 \text{ r } 5$$

$$\begin{array}{r} 27 \text{ r } 5 \\ 36 \overline{) 97257} \end{array}$$

The remainder needs to also be shown as a fraction.

$$2 \overline{) 75} \quad 37 \frac{1}{2}$$

And as a decimal.

$$\begin{array}{r} 37.5 \\ 2 \overline{) 75.0} \end{array}$$

Moving to long division.

$$\begin{array}{r} 496 \text{ r } \frac{3}{5} \\ 5 \overline{) 2483} \\ \underline{-20} \downarrow \\ 48 \downarrow \\ \underline{-45} \downarrow \\ 33 \\ \underline{-30} \\ 3 \end{array}$$

