

Coppice Valley Mathematics Calculation Guidelines

Progression through calculation for **division**

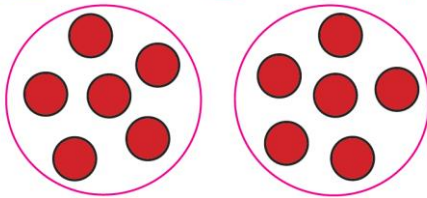
- Children need to understand that division can be sharing or grouping.
- Children should understand that, unlike multiplication, division is not commutative.
- Ensure that children understand the = sign means 'the same as'/equal to and that children see calculations where the equals sign is in a different position e.g. $12 \div 3 = 4$ and $4 = 12 \div 3$.

Year 2

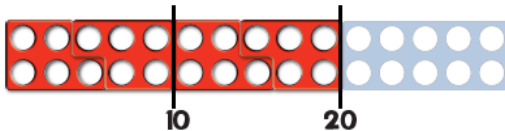
Sharing

$$12 \div 2 = 6$$

"If I share 12 into 2 equal amounts, how many in each group?" Answer: 6

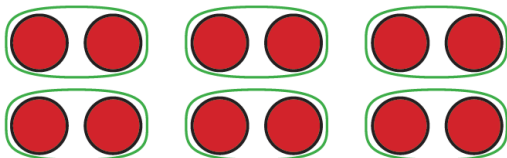


Grouping



$$12 \div 2 = 6$$

"How many groups of 2 can I fit into 12?" Answer: 6



20			
5	5	5	5

Sharing

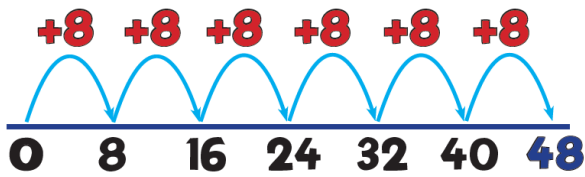
Children will use concrete resources to share whole numbers.

Grouping

Children will use bead strings and numicon initially e.g. how many 5s in 20?

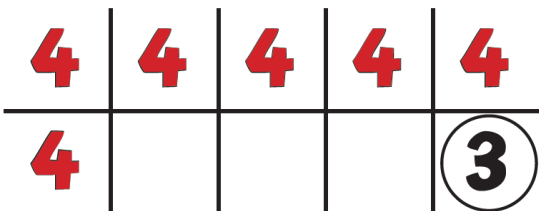
After the concrete stage of learning, children will represent division in a bar model

Year 3



$$48 \div 8 = 6$$

"How many 8s in 48?"
Answer: 6



"How many times can 4 fit (groups of) 4 into 27?"
Answer: 6r3

$$27 \div 4 = 6r3$$

Children will use the grouping method (number line and grid) and known facts to solve division.

Year 4

$98 \div 7$ becomes

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

$432 \div 5$ becomes

$$\begin{array}{r} 86 \text{ r} 2 \\ 5 \overline{) 432} \end{array}$$

Answer: 86 remainder 2

Short division (the 'bus stop' method) to be used to divide 1-digit and 2-digit numbers by single digit numbers. These may include remainders.

This will then progress to divide 3-digit and 4-digit numbers by single digit numbers.

Year 5

Children will 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 including with remainders, as fractions, as decimals or by rounding.

Short division by 1 digit

1	4	4	5	÷	4		
	0	3	6	1	r	1	
4	1	¹ 4	² 4	5			
or	3	6	1	.	2	5	
or	3	6	1	¹ / ₄			

Short division by 2 digits

	4	5	5	0	÷	1	4
		0	3	2	5		
1	4	4	⁴ 5	³ 5	⁷ 0		
Multiples of 14:							
1	4,	2	8,	4	2,	5	6,
7	0,	8	4				

Year 6

Short division by 1 digit

1	4	4	5	÷	4		
	0	3	6	1	r	1	
4	1	¹ 4	² 4	5			
or	3	6	1	.	2	5	
or	3	6	1	¹ / ₄			

Children will divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division (chunking), and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.

Short division by 2 digits

	4	5	5	0	÷	1	4
		0	3	2	5		
1	4	4	45	35	70		
Multiples of 14:							
1	4,	2	8,	4	2,	5	6,
7	0,	8	4				

Long Division

	4	5	5	0	÷	1	4
		0	3	2	5		
1	4	4	5	5	0		
	-	2	8	0	0	X200	
		1	7	5	0		
	-	1	4	0	0	X100	
			3	5	0		
		-	2	8	0	X20	
				7	0		
			-	7	0	X5	