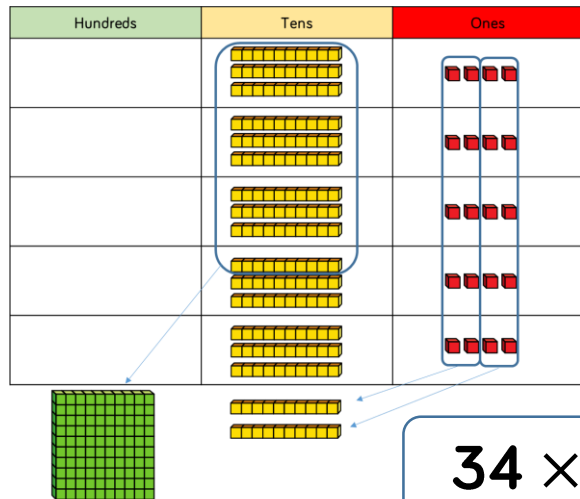


Skill: Multiply 2-digit numbers by 1-digit numbers

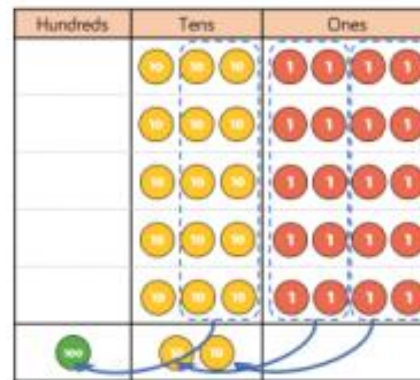
Year: 3/4



	H	T	O	
		3	4	
x			5	
		2	0	(5 × 4)
+	1	5	0	(5 × 30)
	1	7	0	

$$34 \times 5 = 170$$

	H	T	O	
		3	4	
x			5	
	1	7	0	
	1	2		

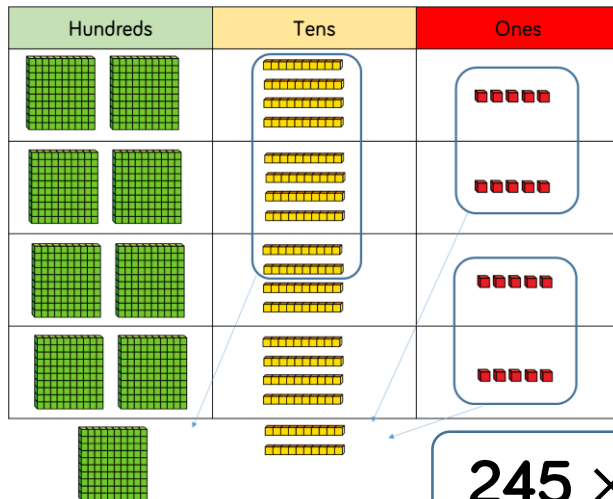


Teachers may decide to first look at the expanded column method before moving on to the short multiplication method.

The place value counters should be used to support the understanding of the method rather than supporting the multiplication, as children should use times table knowledge.

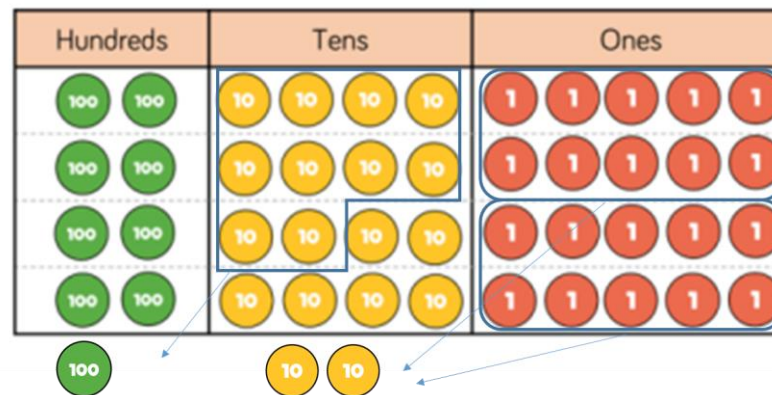
Skill: Multiply 3-digit numbers by 1-digit numbers

Year: 3/4



	H	T	O
	2	4	5
x			4
	9	8	0
	1	2	

$$245 \times 4 = 980$$

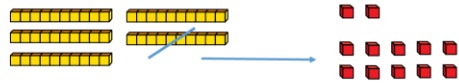










When moving to 3-digit by 1-digit multiplication, encourage children to move towards the short, formal written method.

Base 10 and place value counters continue to support the understanding of the written method. Limit the number of exchanges needed in the questions and move children away from resources when multiplying larger numbers.

Skill: Divide 2-digits by 1-digit (sharing with exchange)

Year: 3/4

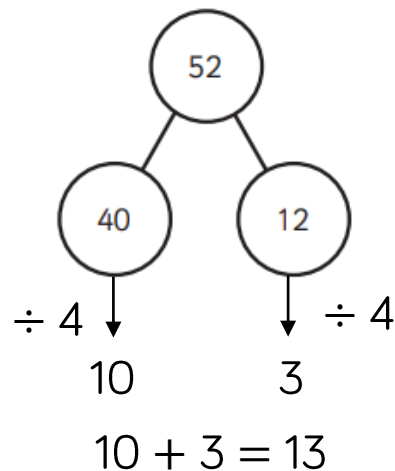










Tens	Ones
	
	
	
	

52

52			
?	?	?	?

$$52 \div 4 = 13$$



Tens	Ones
	
	
	
	

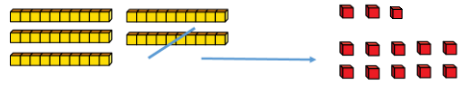
When dividing numbers involving an exchange, children can use Base 10 and place value counters to exchange one ten for ten ones.









Children should start with the equipment outside the place value grid before sharing the tens and ones equally between the rows.

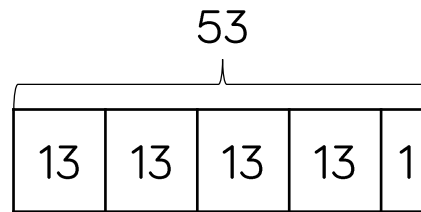
Flexible partitioning in a part-whole model supports this method.

Skill: Divide 2-digits by 1-digit (sharing with remainders)

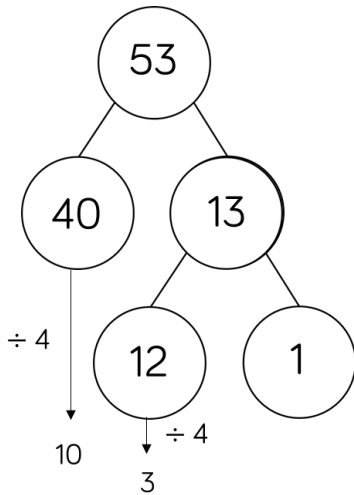
Year: 3/4












Tens	Ones
	
	
	
	



$$53 \div 4 = 13 \text{ r}1$$



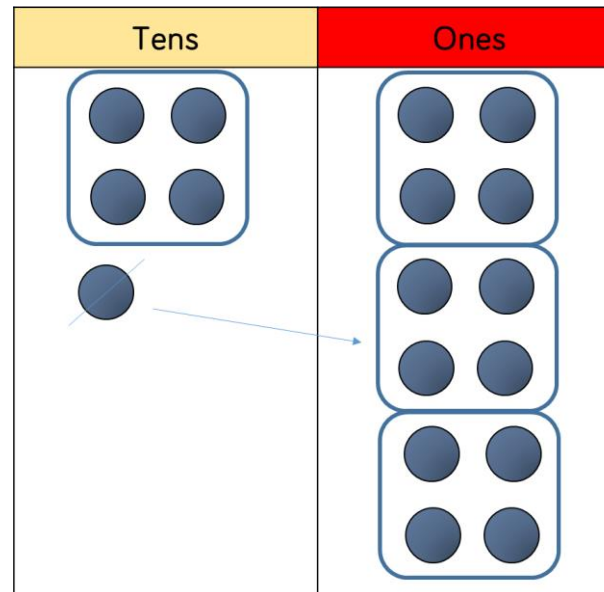
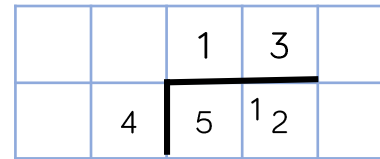
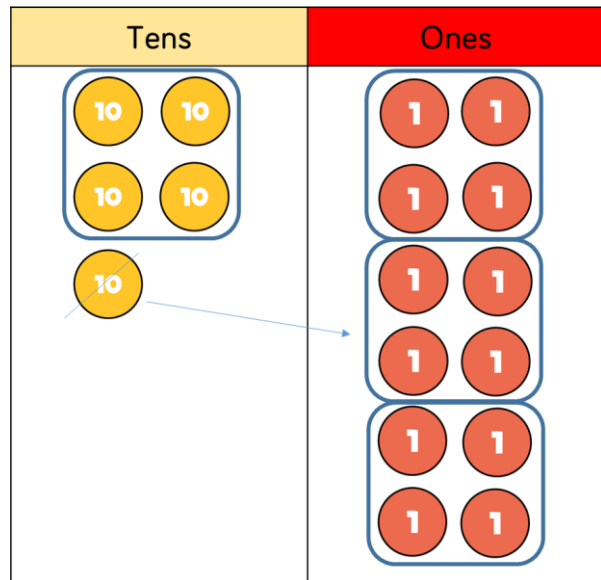
Tens	Ones
	
	
	
	



When dividing numbers with remainders, children can use Base 10 and place value counters to exchange one ten for ten ones. Starting with the equipment outside the place value grid will highlight remainders, as they will be left outside the grid once the equal groups have been made. Flexible partitioning in a part-whole model supports this method.

Skill: Divide 2-digits by 1-digit (grouping)

Year: 4/5



$$52 \div 4 = 13$$

When using the short division method, children use grouping. Starting with the largest place value, they group by the divisor.

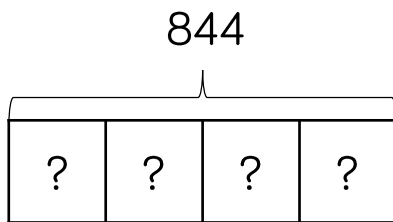
Language is important here. Children should consider 'How many groups of 4 tens can we make?' and 'How many groups of 4 ones can we make?'
















Remainders can also be seen as they are left ungrouped.

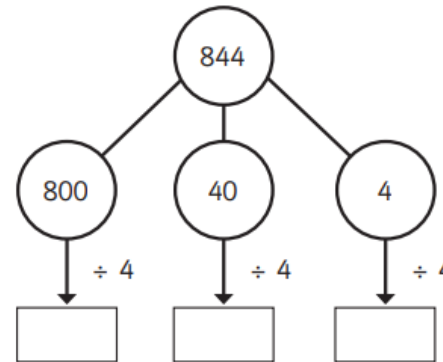
Skill: Divide 3-digits by 1-digit (sharing)

Year: 4

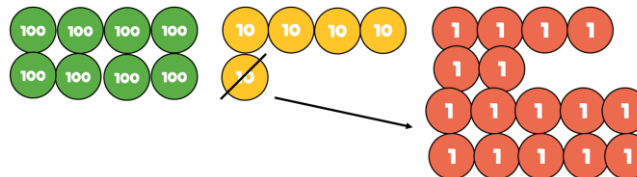
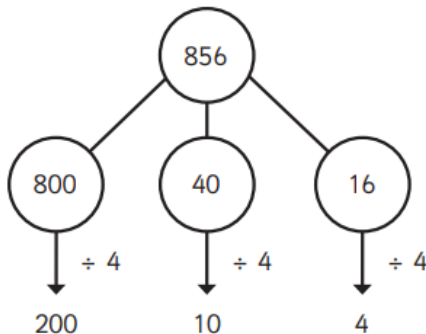
$$844 \div 4 = 211$$































H	T	O
 		
 		
 		
 		



$$844 \div 4 = 211$$



Hundreds	Tens	Ones
 		   
 		   
 		   
 		   

Children can continue to use place value counters to share 3-digit numbers into equal groups. Children should start with the equipment outside the place value grid before sharing the hundreds, tens and ones equally between the rows. This method can also help to highlight remainders. Flexible partitioning in a part-whole model supports this method.

Glossary

Array – An ordered collection of counters, cubes or other item in rows and columns.

Commutative – Numbers can be multiplied in any order.

Dividend – In division, the number that is divided.

Divisor – In division, the number by which another is divided.

Exchange – Change a number or expression for another of an equal value.

Factor – A number that multiplies with another to make a product.

Multiplicand – In multiplication, a number to be multiplied by another.

Partitioning – Splitting a number into its component parts.

Product – The result of multiplying one number by another.

Quotient – The result of a division

Remainder – The amount left over after a division when the divisor is not a factor of the dividend.

Scaling – Enlarging or reducing a number by a given amount, called the scale factor