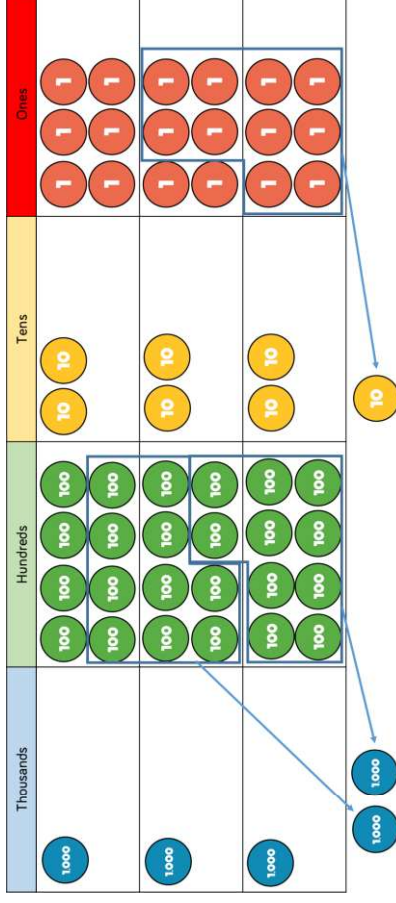


Skill: Multiply 4-digit numbers by 1-digit numbers

Year: 5



$$1,826 \times 3 = 5,478$$

	Th	H	T	O
	1	8	2	6
$\times$				3
	5	4	7	8

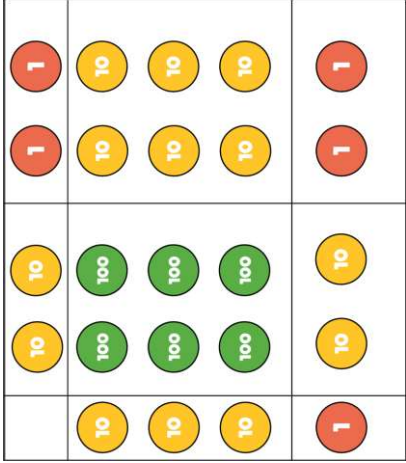
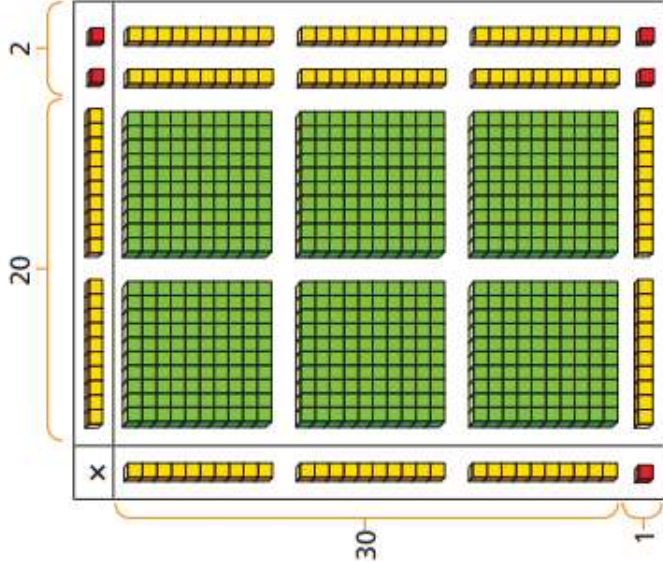
2 1

When multiplying 4-digit numbers, place value counters are the best manipulative to use to support children in their understanding of the formal written method. If children are multiplying larger numbers and struggling with their times tables, encourage the use of multiplication grids so children can focus on the use of the written method.

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

Year: 5

When multiplying a multi-digit number by 2-digits, use the area model to help children understand the size of the numbers they are using. This links to finding the area of a rectangle by finding the space covered by the Base 10. The grid method matches the area model as an initial written method before moving on to the formal written multiplication method.



X	20	2
30	600	60
1	20	2

	H	T	O
		2	2
x		3	1
		2	2
	6	6	0
	6	8	2

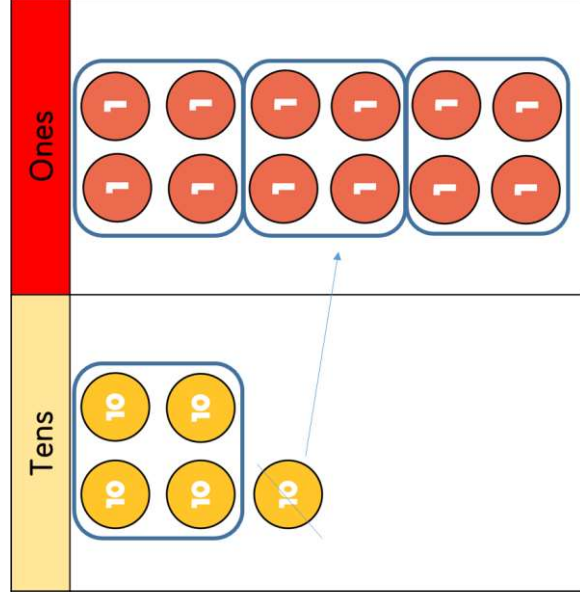
$$22 \times 31 = 682$$

Skill: Multiply 3-digit numbers by 2-digit numbers	Year: 5
100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 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100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 100 1000 1000 10 100 100 10 100 100 10 100 100 1 100 100 10 1000 1000 1000 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10 <	

Skill: Multiply 4-digit numbers by 2-digit numbers	Year: 5/6																																													
<table><tr><th>TTh</th><th>Th</th><th>H</th><th>T</th><th>O</th></tr><tr><td></td><td>2</td><td>7</td><td>3</td><td>9</td></tr><tr><td>×</td><td></td><td></td><td>2</td><td>8</td></tr><tr><td colspan="5"> </td></tr><tr><td>2</td><td>1</td><td>9</td><td>1</td><td>2</td></tr><tr><td>2</td><td>5</td><td>3</td><td>7</td><td></td></tr><tr><td>5</td><td>4</td><td>7</td><td>8</td><td>0</td></tr><tr><td>1</td><td></td><td>1</td><td></td><td></td></tr><tr><td>7</td><td>6</td><td>6</td><td>9</td><td>2</td></tr></table> 1 2,739 × 28 = 76,692	TTh	Th	H	T	O		2	7	3	9	×			2	8						2	1	9	1	2	2	5	3	7		5	4	7	8	0	1		1			7	6	6	9	2	When multiplying 4-digits by 2-digits, children should be confident in the written method. If they are still struggling with times tables, provide multiplication grids to support when they are focusing on the use of the method. Consider where exchanged digits are placed and make sure this is consistent.
TTh	Th	H	T	O																																										
	2	7	3	9																																										
×			2	8																																										
2	1	9	1	2																																										
2	5	3	7																																											
5	4	7	8	0																																										
1		1																																												
7	6	6	9	2																																										

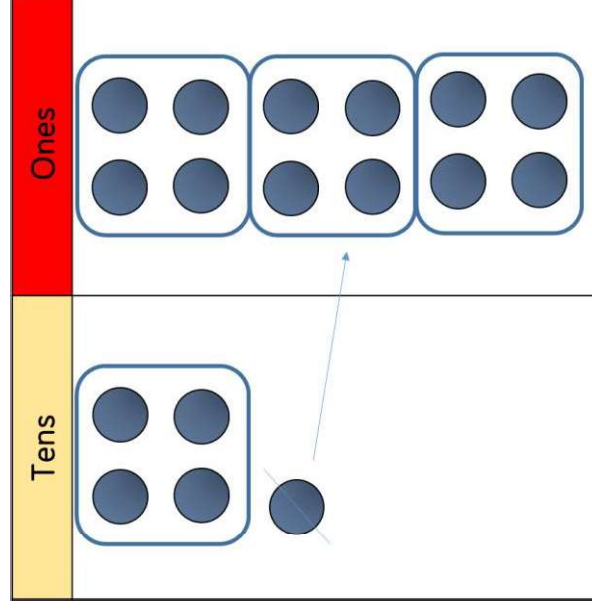
Skill: Divide 2-digits by 1-digit (grouping)

Year: 4/5



$$52 \div 4 = 13$$

		1	3	
		4	5	1 2



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?'

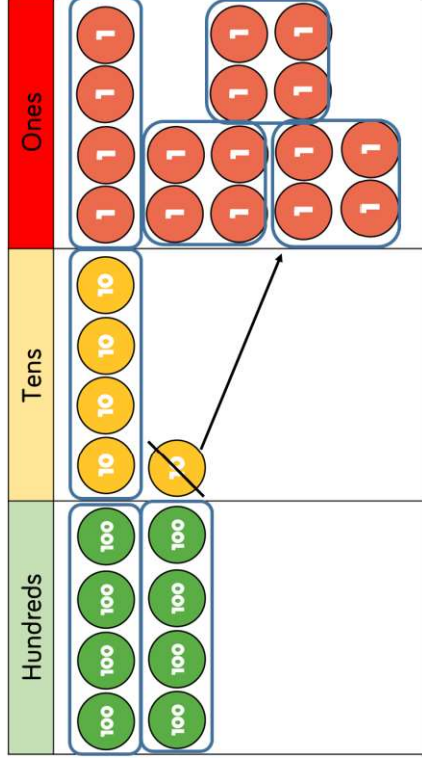
Remainders can also be seen as they are left ungrouped.

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

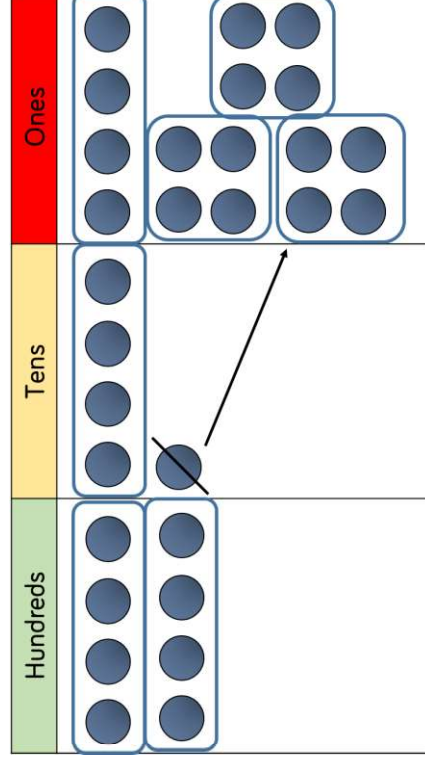
Year: 5

Children can continue to use grouping to support their understanding of short division when dividing a 3-digit number by a 1-digit number.

Place value counters or plain counters can be used on a place value grid to support this understanding. Children can also draw their own counters and group them through a more pictorial method.



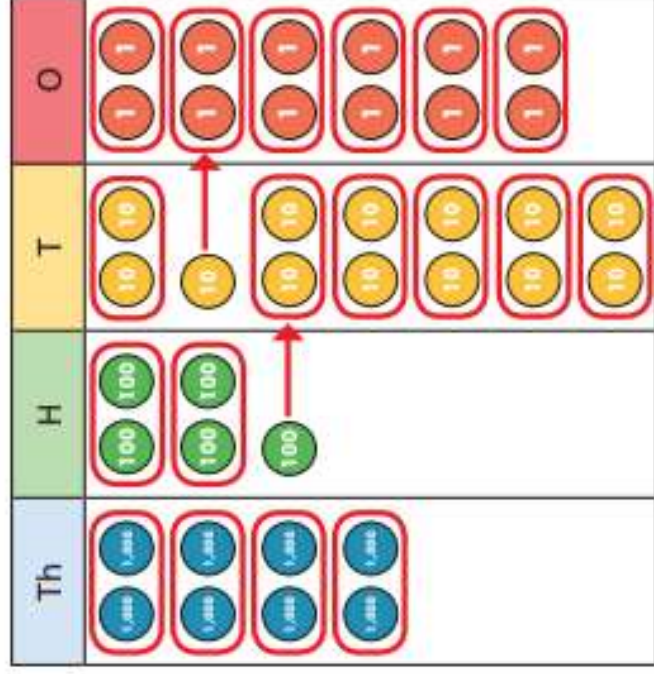
			2	1	4
			8	5	16
		4			



$$856 \div 4 = 214$$

Skill: Divide 4-digits by 1-digit (grouping)

Year: 5



	4	2	6	6
2	8	5	13	12

Place value counters or plain counters can be used on a place value grid to support children to divide 4-digits by 1-digit. Children can also draw their own counters and group them through a more pictorial method.

Children should be encouraged to move away from the concrete and pictorial when dividing numbers with multiple exchanges.

$$8,532 \div 2 = 4,266$$

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