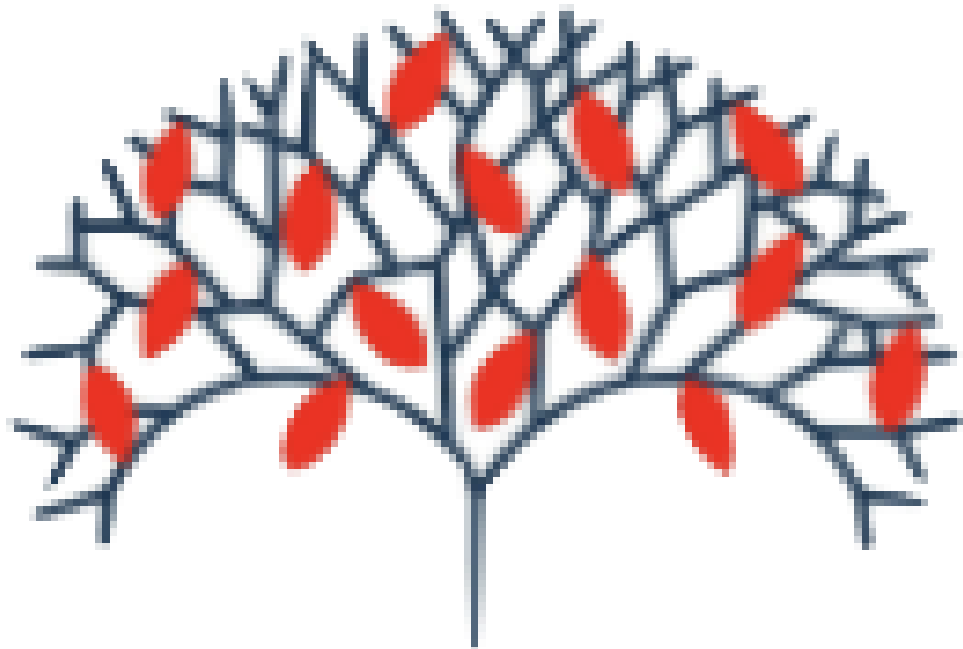


# **Maths Parent Workshop**

## **-What we Teach, How we Teach it -**

### **Multiplication and Division**

### **March 2023**



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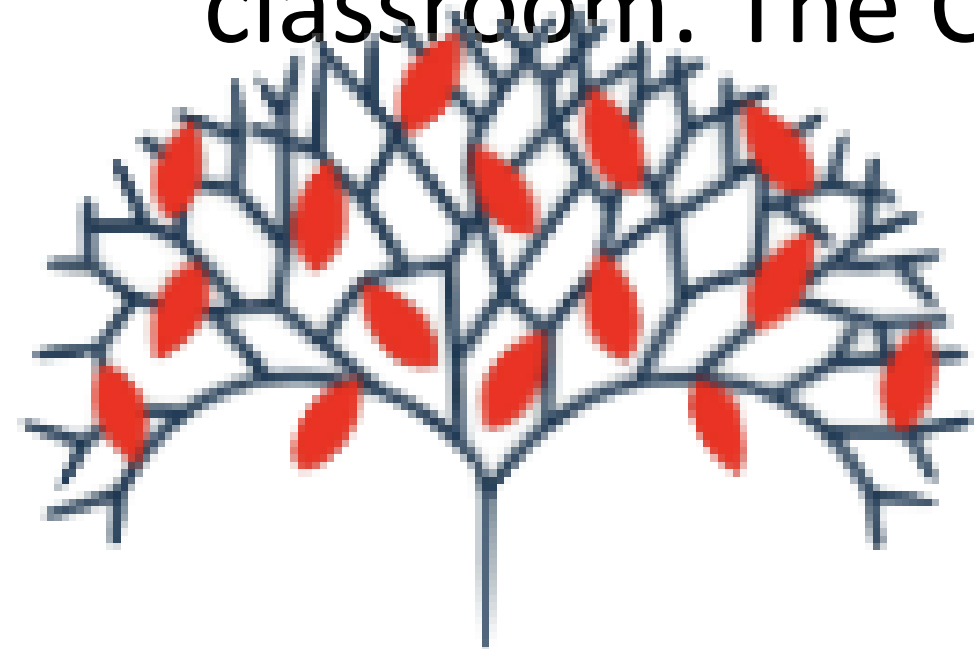
## **Year 5 and Year 6**

## Concrete, Pictorial, Abstract

The children's understanding of the calculation strategies that they are taught through school will be underpinned by a secure understanding of place value. At Lindow Community we teach through a **CPA (concrete, pictorial, abstract) approach**.

Understanding in all areas of maths will be developed by children using concrete resources and interpreting and using pictorial representations before moving onto solve abstract calculations.

There are a range of place value and counting resources available for the children to use in each classroom. The CPA process/approach will be clearly exemplified on maths working walls for the current maths focus



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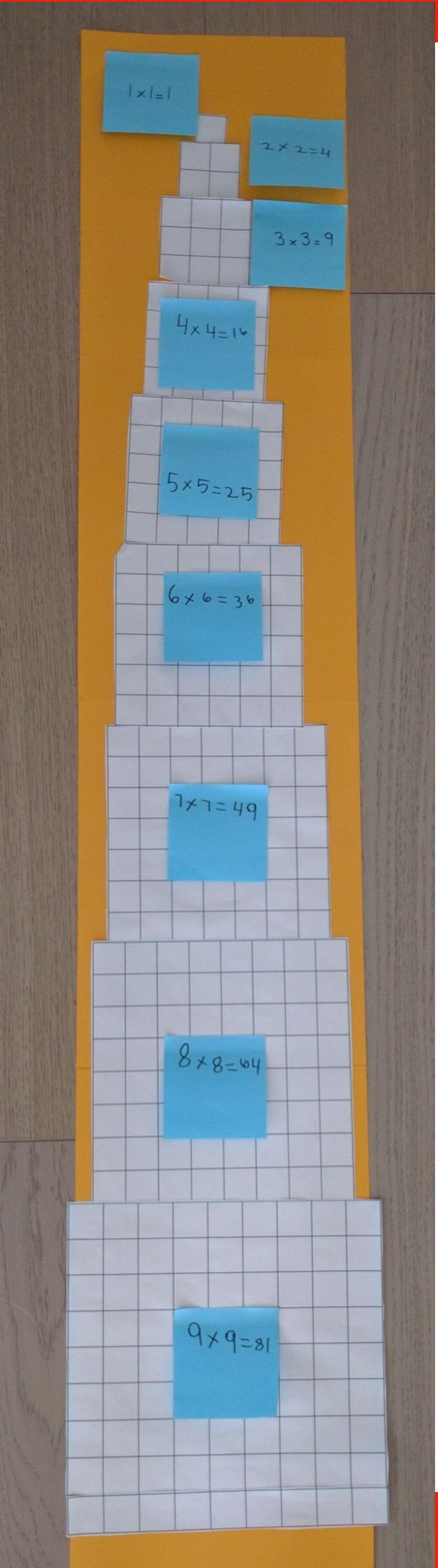
# Useful Resources

Concrete resources are VITAL in the children’s early understanding of number and calculation.

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144



Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

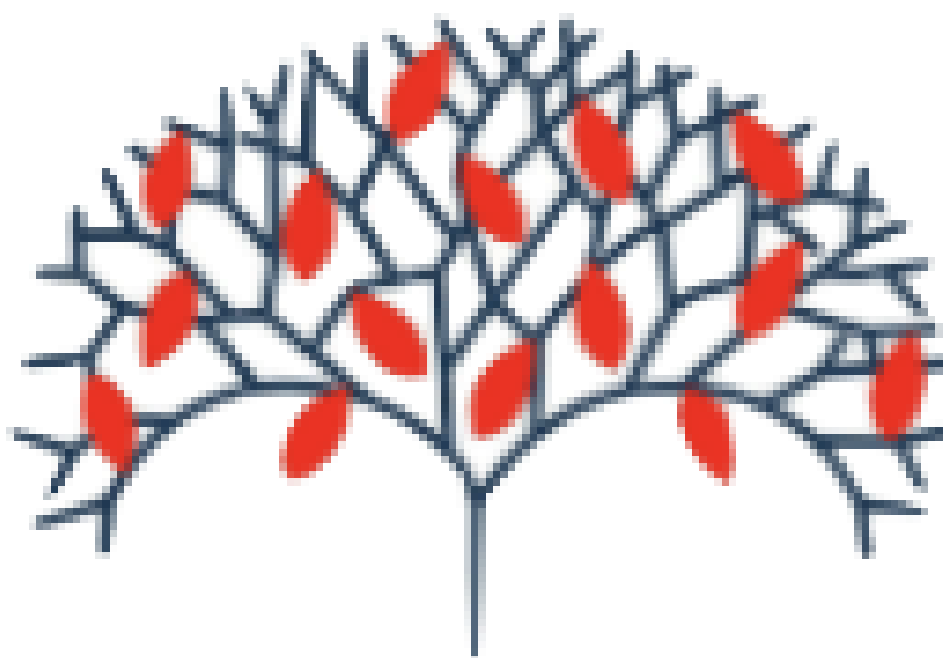




# MULTIPLICATION

Year 5

National Curriculum Objectives: Multiplication objectives from Multiplication and Division Strand	Key Skills/ other linked NC Objectives (Place Value)	Key Vocabulary
<ul style="list-style-type: none"> <li>• Multiply numbers up to 4 digits by a one-digit or two-digit number including long multiplication for multiplying by two-digit numbers.</li> <li>• Identify multiples and factors</li> <li>• Multiply mentally, drawing upon known facts.</li> <li>• Multiply whole numbers and those involving decimals by 10, 100 and 1,000.</li> <li>• Recognise and use square and cube numbers.</li> <li>• Solve problems using the 4 operations, and a combination of these, including understanding the meaning of the equals sign.</li> <li>• Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> </ul>	<ul style="list-style-type: none"> <li>• Count forwards in steps of powers of 10 for any given number up to 1,000,000.</li> </ul>	<p><i>All previous vocabulary, plus:</i></p> <p>Square number, cube number integer, short multiplication, long multiplication</p>



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# MULTIPLICATION

Year 6

National Curriculum Objectives:  
Multiplication objectives from Addition,  
subtraction, multiplication and division  
strand.

- Multiply numbers up to 4-digits by 2-digit numbers using long multiplication.
- Perform mental calculations, including with mixed operations and large numbers.
- Identify common factors and common multiples.
- Use their knowledge of the other of operations to carry out calculations involving the four operations.
- Solve problems involving the four operations.
- Use estimation to check answers to calculations.

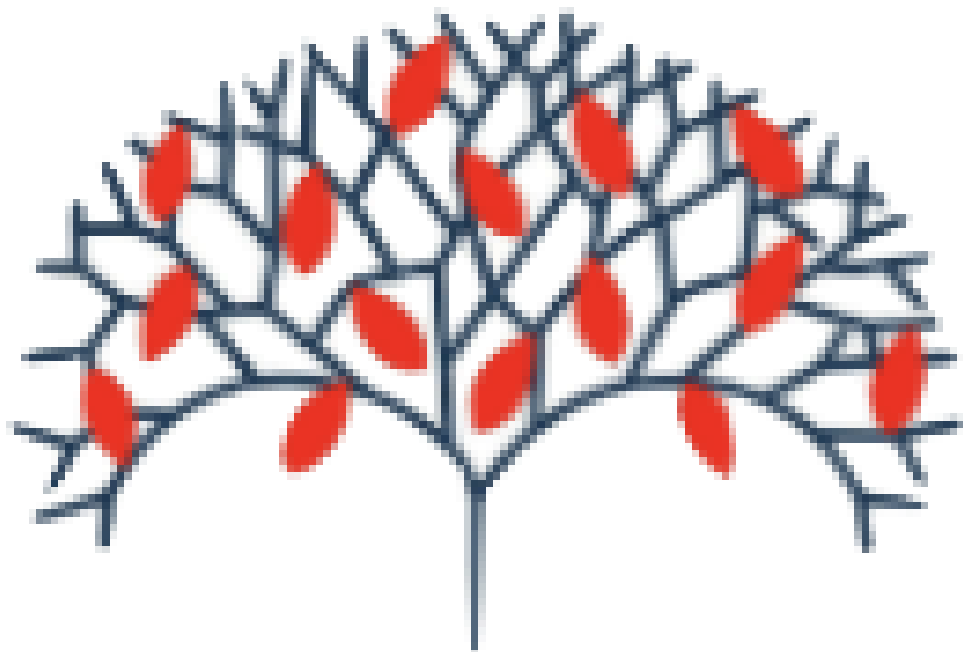
Key Skills/ other linked  
NC Objectives (Place  
Value)

- Understanding place value in large numbers

Key Vocabulary

*All previous vocabulary, plus:*

Tenths, hundredths, decimals

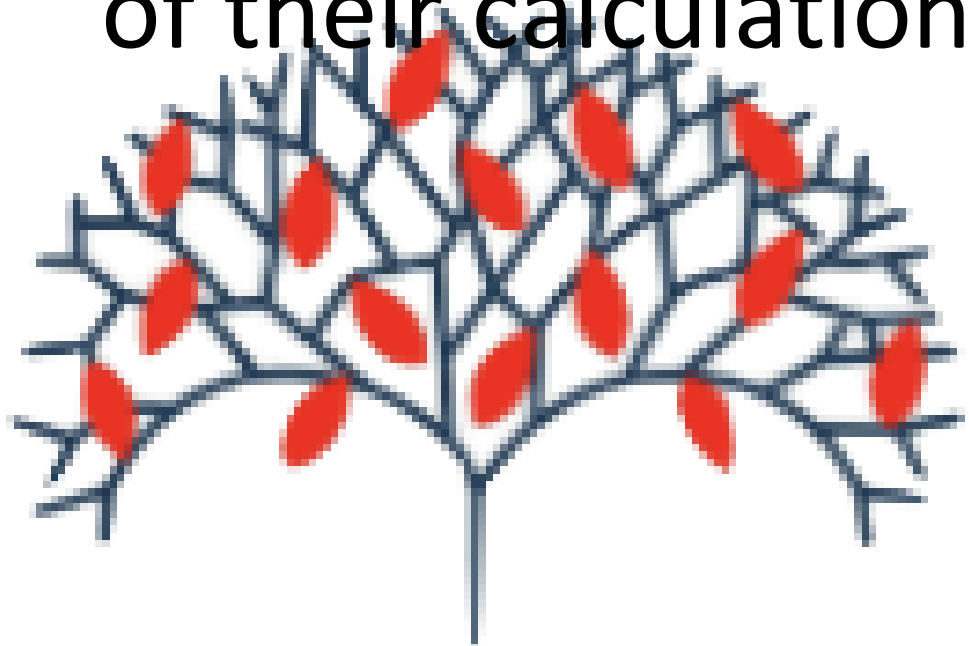


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## Y5 Children should:

- Now be able to recall the multiplication facts for ALL their times tables up to  $12 \times 12$ . Children need to be given regular opportunities to increase their speed and confidence with this, as well as apply these facts to other calculations.
- Be taught specifically, through exploration of place value, to multiply by 10, 100 and 1,000. Children should be confident in discussing the place value of each digit and how these change.
- Have the opportunity to apply their known number facts to solve other calculations. E.g. if  $7 + 4 = 11$ , then  $70 + 40 =$ ,  $700 + 400 =$  etc.
- Be given regular opportunity to approximate before they calculate and use this to check the accuracy of their calculations.



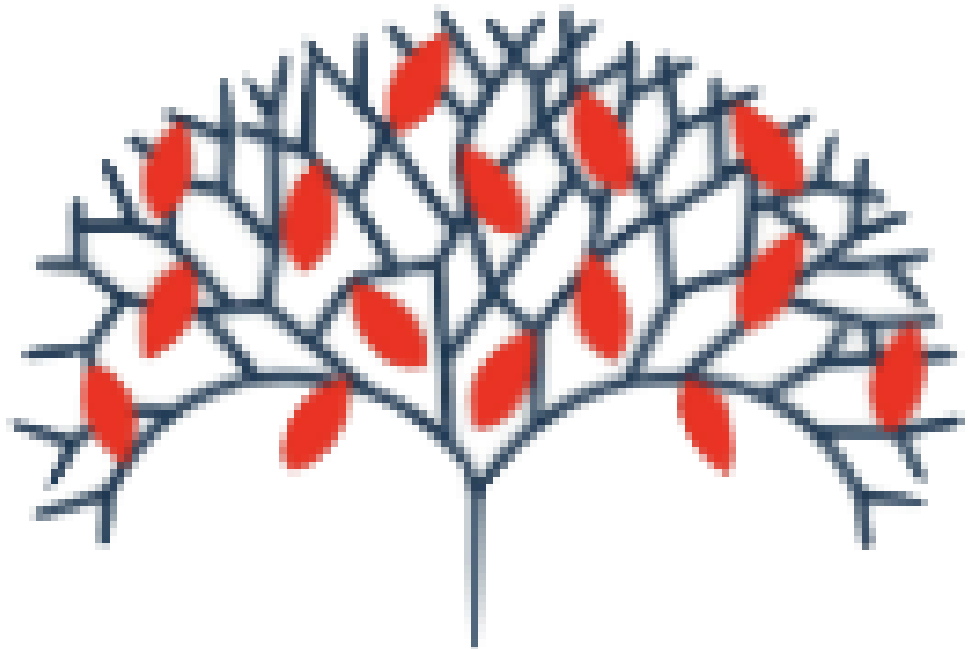
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## Y6 Children should:

- Have the opportunity to consolidate previous multiplication work and track back if they are not secure.
- Have the opportunity to apply short and long division to various contexts and use it as part of their varied fluency, reasoning and problem solving.
- Be given regular opportunity to approximate before they calculate and use this to check the accuracy of their calculations.

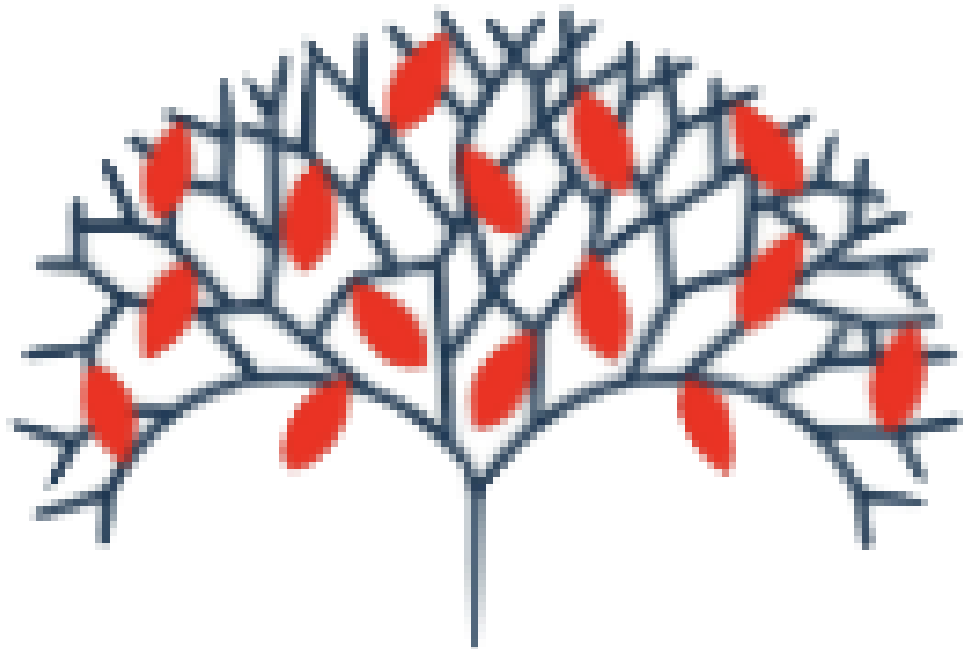


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## Mental Methods:

- Counting in steps of powers of 10
- Use commutativity and tables to multiply
- Use known facts and place value to multiply
- Use related facts to multiply
- Scaling up using known facts to multiply
- Recall of all times tables up to 12 X 12
- Using times table facts to recognise and use square and cube numbers.
- Use understanding of multiplying by 10, 100 or 1,00 and how the digits change in their place value.
- Use the relationship between multiplication and division.
- Recalling square and cubed numbers
- Use known facts and place value to multiply.
- Scaling up using known facts.
- Use the relationship between multiplication and division.



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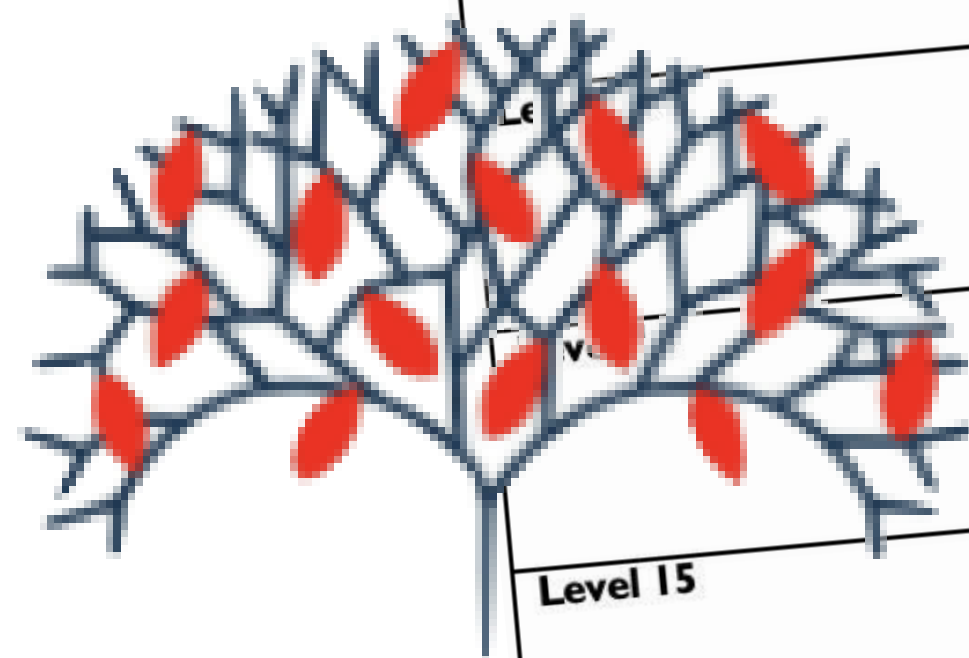
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# Times table system

<b>Level 8</b>	League Two - $0 \times 2$ , 5 or 10 to $6 \times 2$ , 5 or 10 questions League One - $6 \times 2$ , 5 or 10 to $12 \times 2$ , 5 or 10 questions EFL Championship - Mixed $\times 2$ , 5 or 10 questions Premier League - $\div 2$ , 5 or 10 European Championship - Missing number calculations including $\times 2$ , 5 or 10 and $\div 2$ , 5 or 10
<b>Level 9</b>	League Two - $0 \times 3$ to $6 \times 3$ questions League One - $6 \times 3$ to $12 \times 3$ questions EFL Championship - Mixed $\times 3$ questions Premier League - $\div 3$ European Championship - Missing number calculations including $\times 3$ and $\div 3$
<b>Level 10</b>	League Two - $0 \times 6$ to $6 \times 6$ questions League One - $6 \times 6$ to $12 \times 6$ questions EFL Championship - Mixed $\times 6$ questions Premier League - $\div 6$ European Championship - Missing number calculations including $\times 6$ and $\div 6$
<b>Level 11</b>	League Two - $0 \times 4$ to $6 \times 4$ questions League One - $6 \times 4$ to $12 \times 4$ questions EFL Championship - Mixed $\times 4$ questions Premier League - $\div 4$ European Championship - Missing number calculations including $\times 4$ and $\div 4$
<b>Level 12</b>	League Two - $0 \times 8$ to $6 \times 8$ questions League One - $6 \times 8$ to $12 \times 8$ questions EFL Championship - Mixed $\times 8$ questions Premier League - $\div 8$ European Championship - Missing number calculations including $\times 8$ and $\div 8$
<b>Level 13</b>	League Two - $0 \times 7$ to $6 \times 7$ questions League One - $6 \times 7$ to $12 \times 7$ questions EFL Championship - Mixed $\times 7$ questions Premier League - $\div 7$ European Championship - Missing number calculations including $\times 7$ and $\div 7$
<b>Level 14</b>	League Two - $0 \times 9$ to $6 \times 9$ questions League One - $6 \times 9$ to $12 \times 9$ questions EFL Championship - Mixed $\times 9$ questions Premier League - $\div 9$ European Championship - Missing number calculations including $\times 9$ and $\div 9$
<b>Level 15</b>	League Two - $0 \times 11$ to $6 \times 11$ questions League One - $6 \times 11$ to $12 \times 11$ questions EFL Championship - Mixed $\times 11$ questions Premier League - $\div 11$ European Championship - Missing number calculations including $\times 11$ and $\div 11$
<b>Level 16</b>	League Two - $0 \times 12$ to $6 \times 12$ questions League One - $6 \times 12$ to $12 \times 12$ questions EFL Championship - Mixed $\times 12$ questions Premier League - $\div 12$ European Championship - Missing number calculations including $\times 12$ and $\div 12$

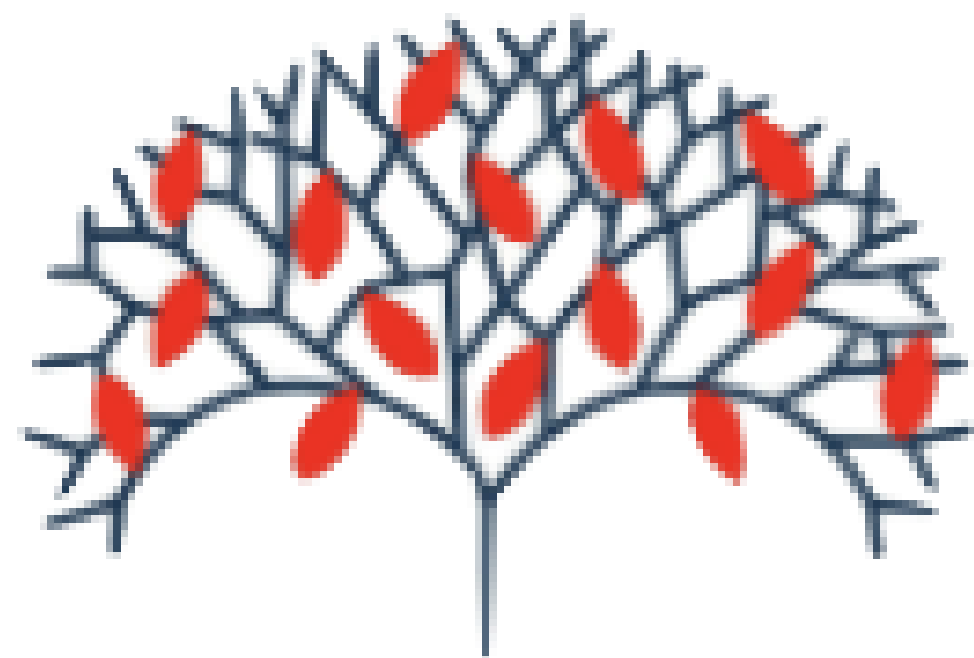
<b>Level 17</b>	League Two - Mixed all tables to $\times 12$ questions League One - Mixed all tables to $\times 12$ questions including division EFL Championship - Mixed all tables to $\times 12$ questions including division and missing numbers Premier League - Timed $12 \times 12$ multiplication grid European Championship - Timed $12 \times 12$ multiplication grid (mixed & missing numbers)
<b>Level 18</b>	League Two - Square and Cube numbers League One - Counting forwards and backwards in Multiplies EFL Championship - Listing Factors Premier League - Prime Numbers European Championship - Negative numbers more and less
<b>Level 19</b>	League Two - Multiplying whole numbers by 10, 100 and 1000 League One - Dividing whole numbers by 10, 100 and 1000 EFL Championship - multiply and divide whole numbers by 10, 100 and 1000 Premier League - multiply decimals by 10, 100 and 1000 European Championship - divide decimals by 10, 100 and 1000
<b>Level 20</b>	League Two - add like fractions League One - subtract like fractions EFL Championship - simplify fractions Premier League - add unlike fractions European Championships - subtract unlike fractions
<b>Level 21</b>	League Two - 50% of integers League One - 10% of integers EFL Championship - 25%, 50%, 75% of integers Premier League - 25%, 50%, 75% of integers and multiples of 10% European Championships - 1% of integers
<b>Level 22</b>	League Two - multiply single digit decimals below 1 by single digit integers League One - multiply single digit decimals below 10 by single digit integers EFL Championship - Premier League - European Championships -





# Calculating the '17' times table:

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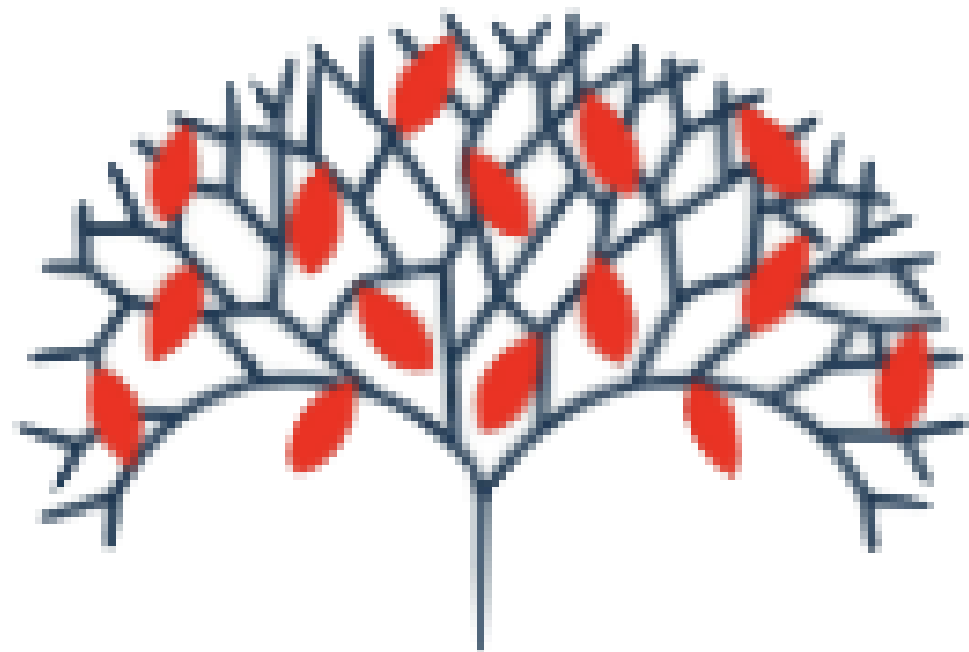




## Written Methods:

### Step 1: Short multiplication for multiplying by a one-digit number

Children use this method to multiply four-digit numbers by a one-digit number, in a range of contexts and units. You may need to back track to grid method or use concrete and pictorial for those children not yet secure.



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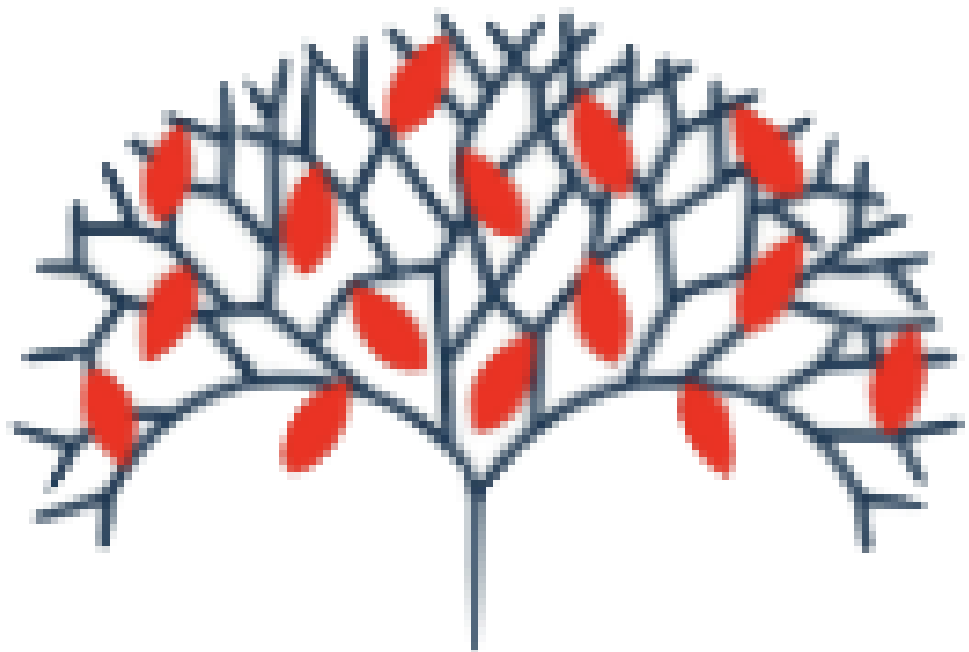
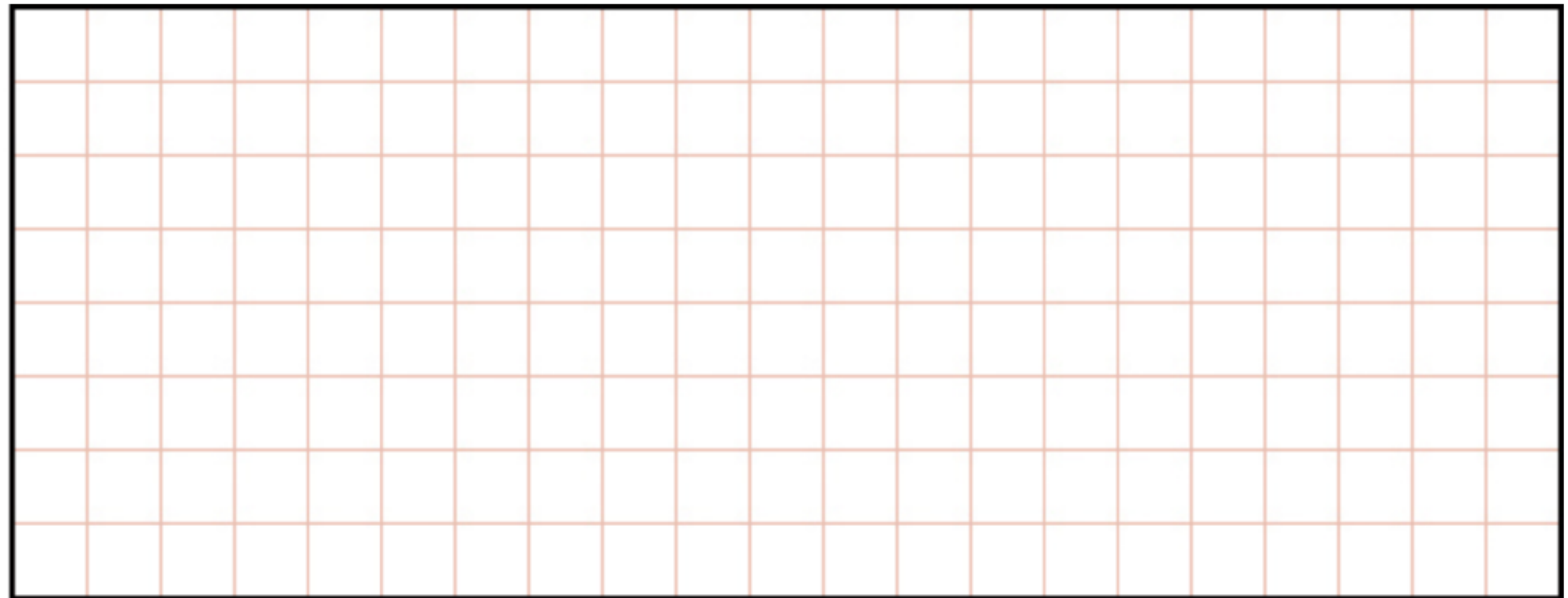
A photograph of a handwritten short multiplication problem on a grid background. The problem is 3753 multiplied by 7. The multiplication is written as follows:  
3753  
x 7  
-----  
26271  
532  
The final result is 26271, with a carry of 532 written below the line.

	3	7	5	3	
x				7	
	2	6	2	7	1
	5	3	2		

## Written Methods:

Step 1: Short multiplication for multiplying by a one-digit number

= 596 × 7



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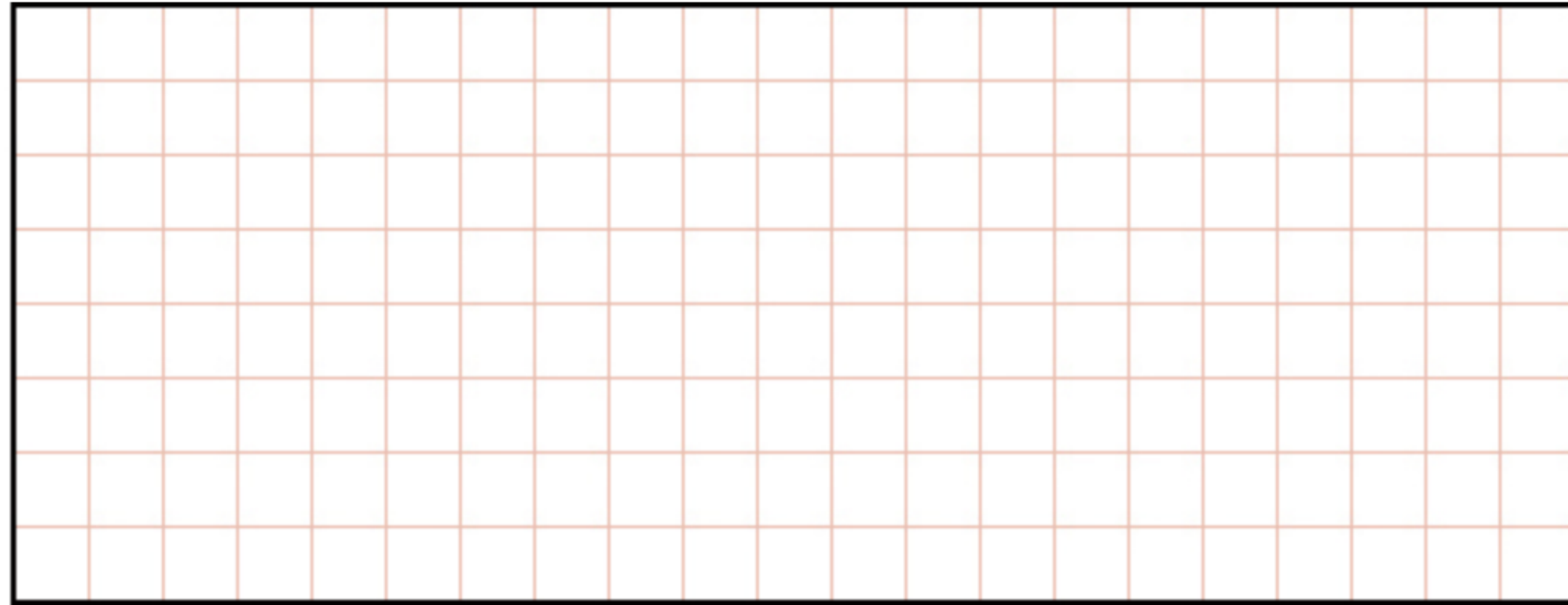
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# Written Methods: SPOT THE MISTAKE

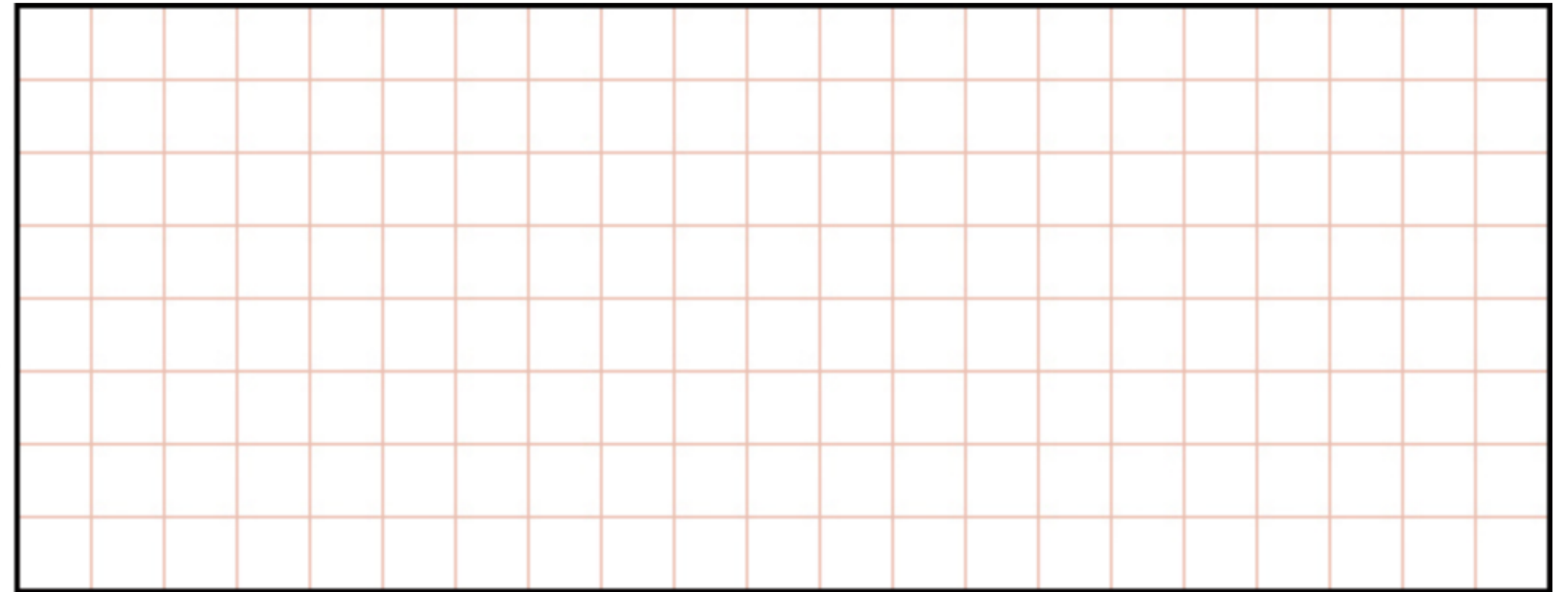
$0 \times 989 =$

989



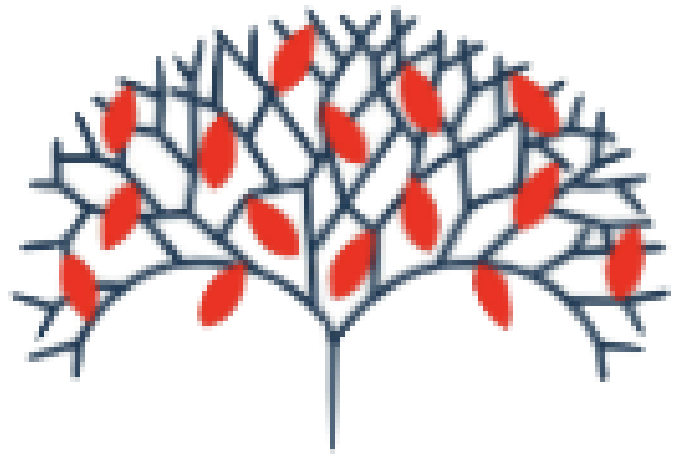
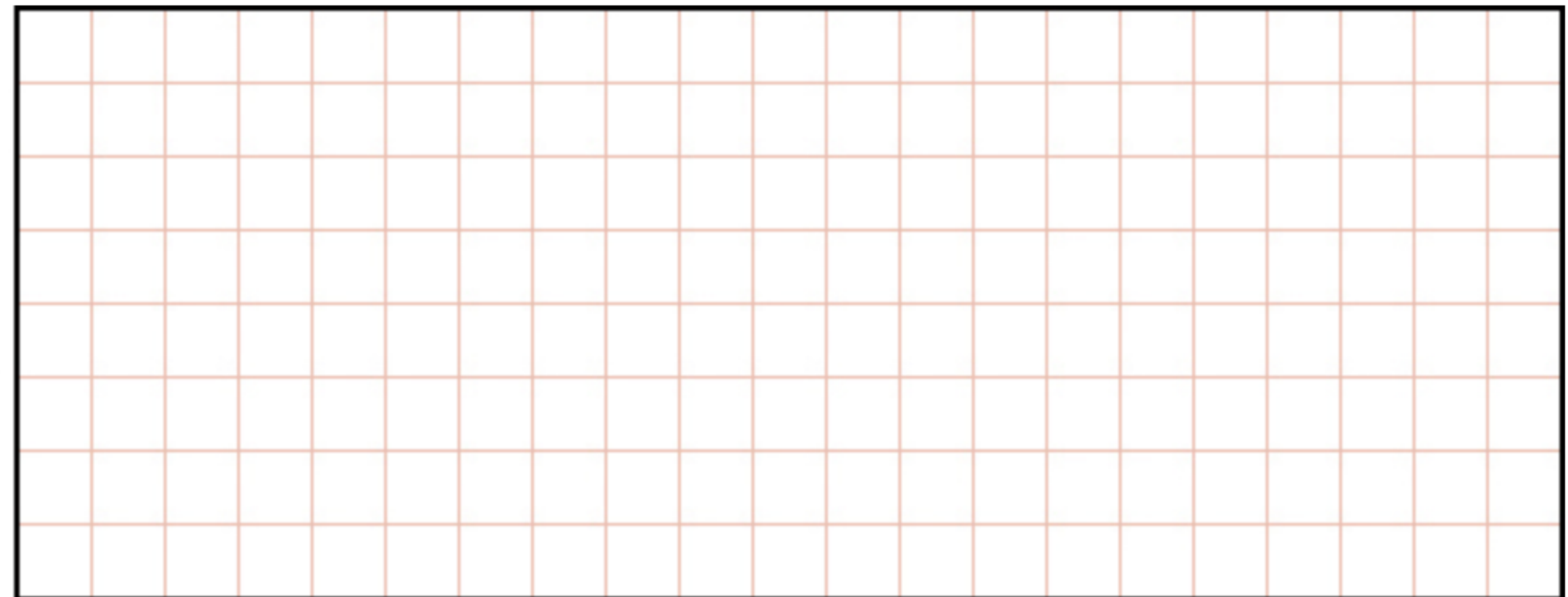
$30 \times 40 =$

120



$101 \times 1,000 =$

100010



Written Methods:

Step 2: Introduce long multiplication for multiplying up to four-digit numbers by two-digit numbers.

The grid method can be used to introduce long multiplication as this method not only shows each row clearly but will be a familiar method to the children. Children when multiplying by the tens number, children should be taught to put the '0' in the ones column then think '1 times 8, 1 times 1' etc., as long as they understand the place value involved.

x	10	9
10	100	90
4	40	36



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$$\begin{array}{r} 19 \\ \times 14 \\ \hline 369 \times 4 \\ 4010 \times 4 \\ 909 \times 10 \\ 10010 \times 10 \\ \hline 266 \end{array}$$

$$\begin{array}{r} 1357 \\ \times 13 \\ \hline 4071 \\ 13570 \\ \hline 17641 \end{array}$$

$$\begin{array}{r} 19 \\ \times 14 \\ \hline 76 \\ 190 \\ \hline 266 \end{array}$$



## Written Methods:

Step 2: Introduce long multiplication for multiplying up to four-digit numbers by two-digit numbers.

Scott is working out  $23 \times 14$

Use the area model to help complete Scott's workings.

$\times$	10	4
20	200	80
3	30	12

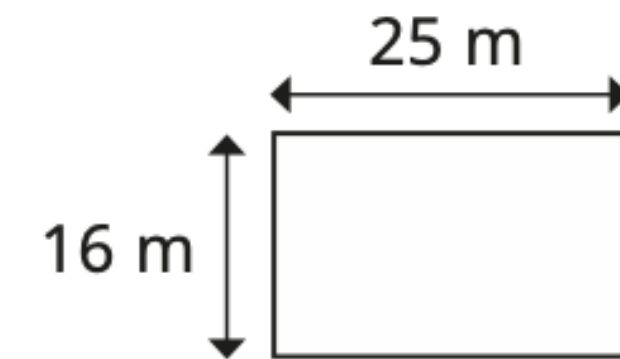
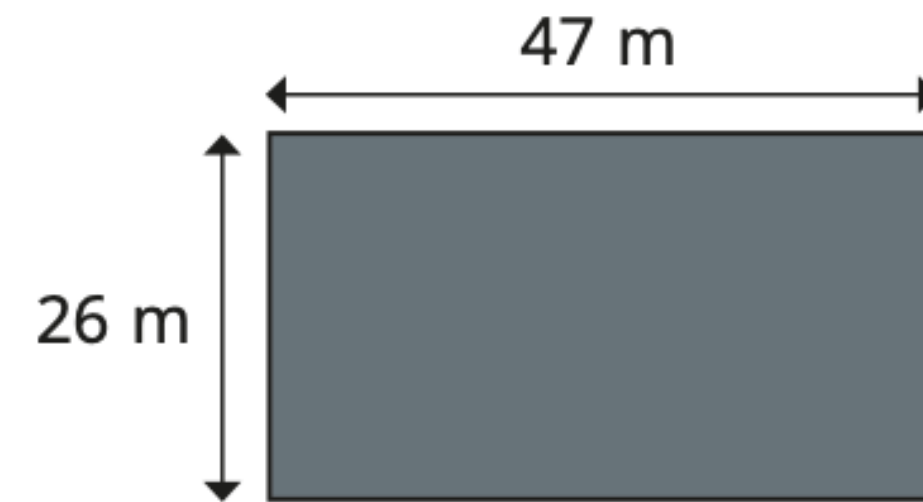
$$200 + 30 + 80 + 12 = 322$$

			2	3	
	x		1	4	

(23 × 4)

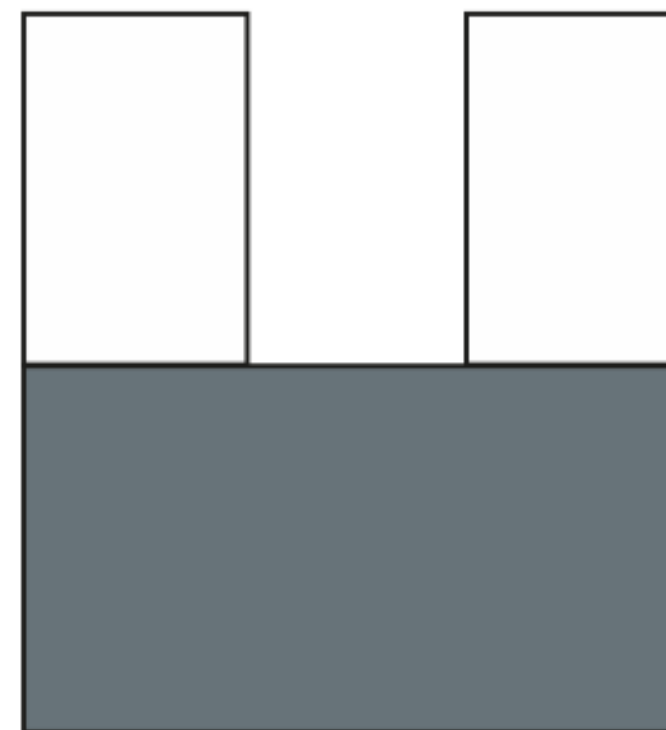
(23 × 10)

Here are two rectangles.

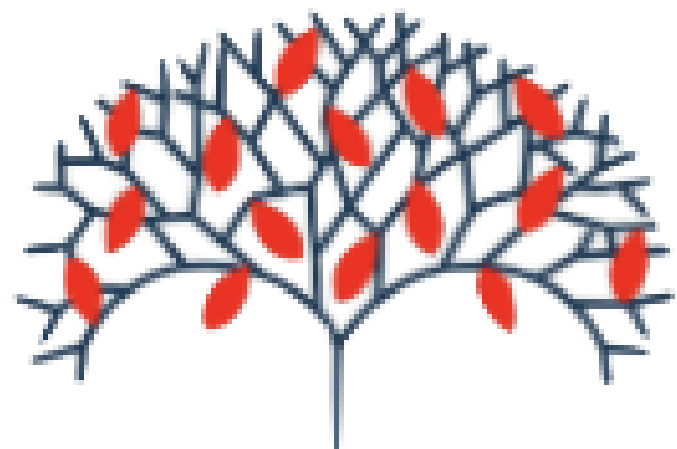


- a)** This compound shape is made using one of the grey rectangles and two of the white rectangles.

What is the area of the compound shape?



$m^2$

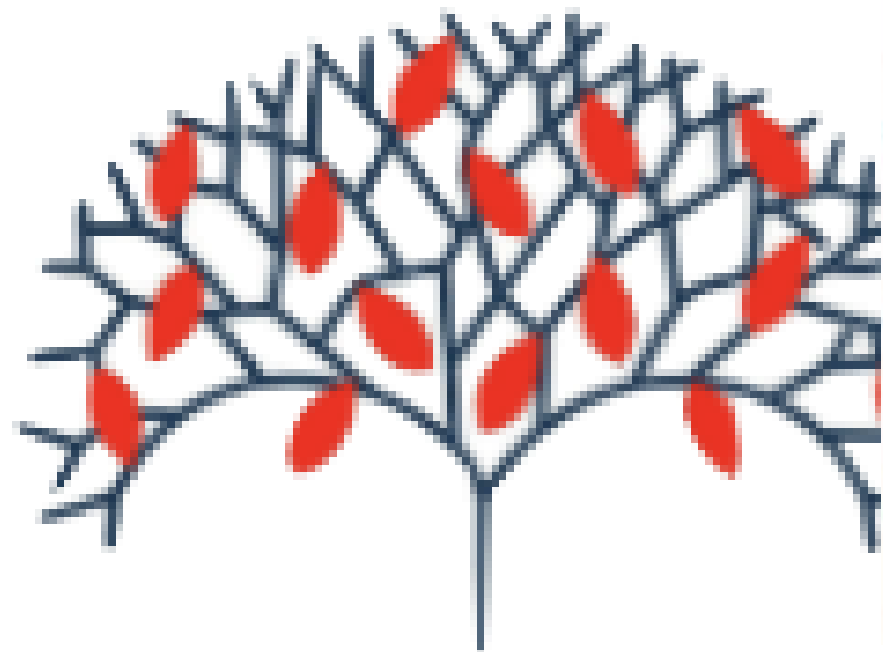


## Written Methods: Short and long Multiplication

Children will use short multiplication to multiply numbers with more than 4 digits by a one-digit number, to multiply money and measures and to multiply decimals with up to 2 decimal places by a single digit.

	4	.	2	6	
x				8	
3	4	.	0	8	
	2		4		

Children will use long multiplication to multiply numbers with up to 4-digits by two-digit numbers.



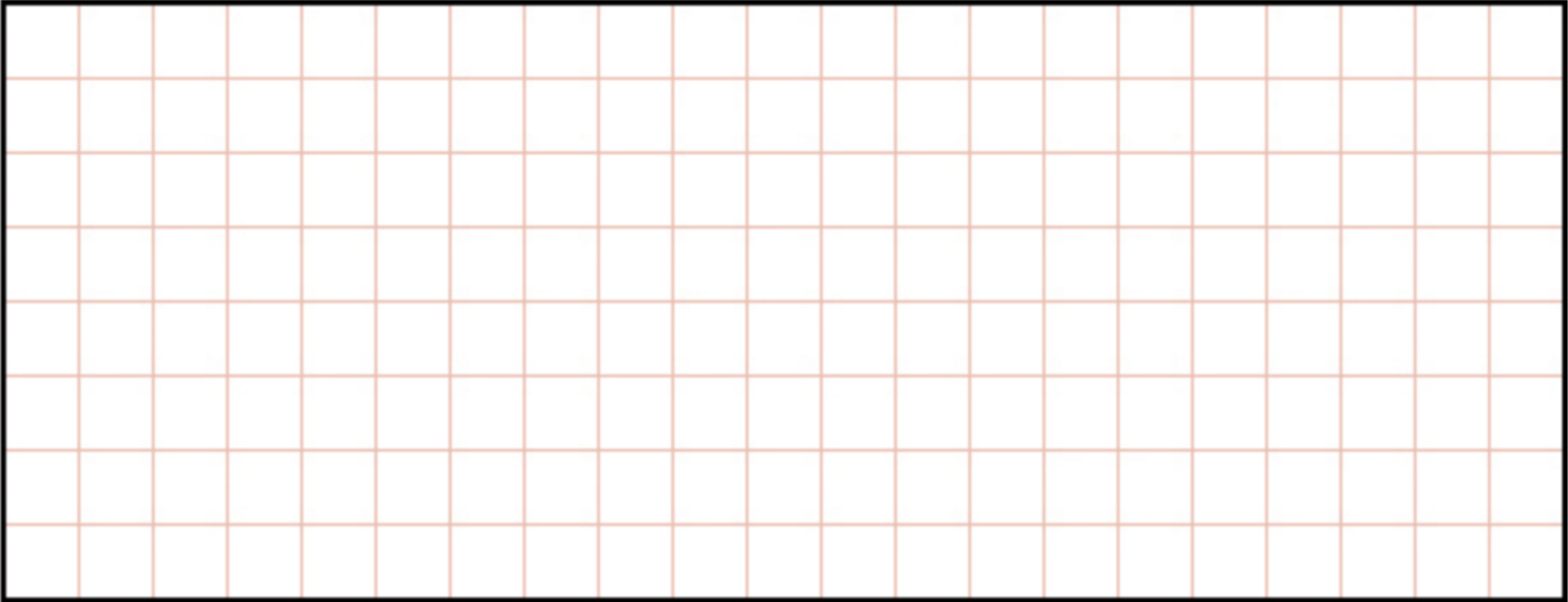
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[illegible]

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Layla makes jewellery to sell at a school fair.

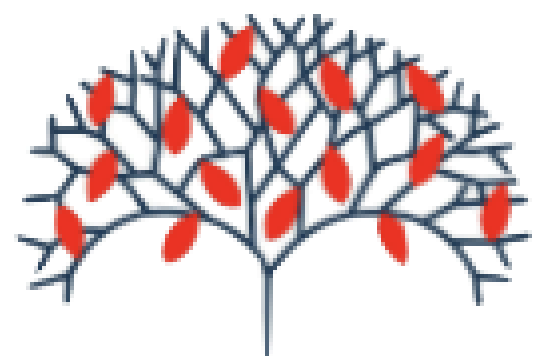
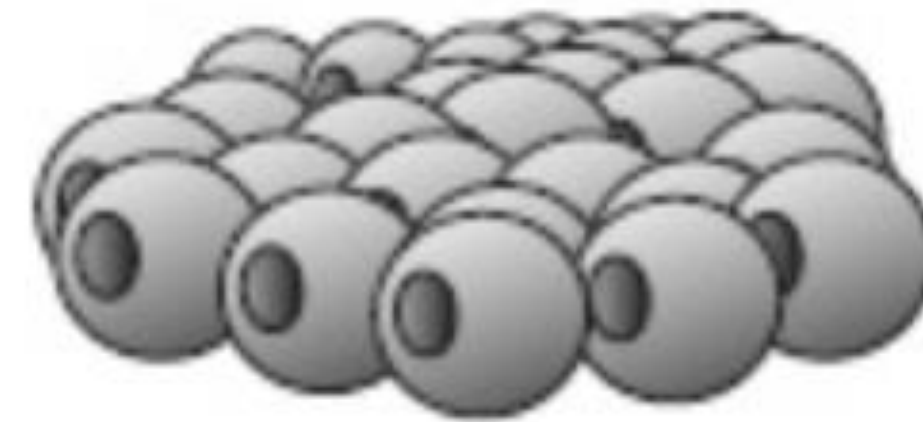
Each bracelet has **53** beads.

She makes **68** bracelets.

Each necklace has **105** beads.

She makes **34** necklaces.

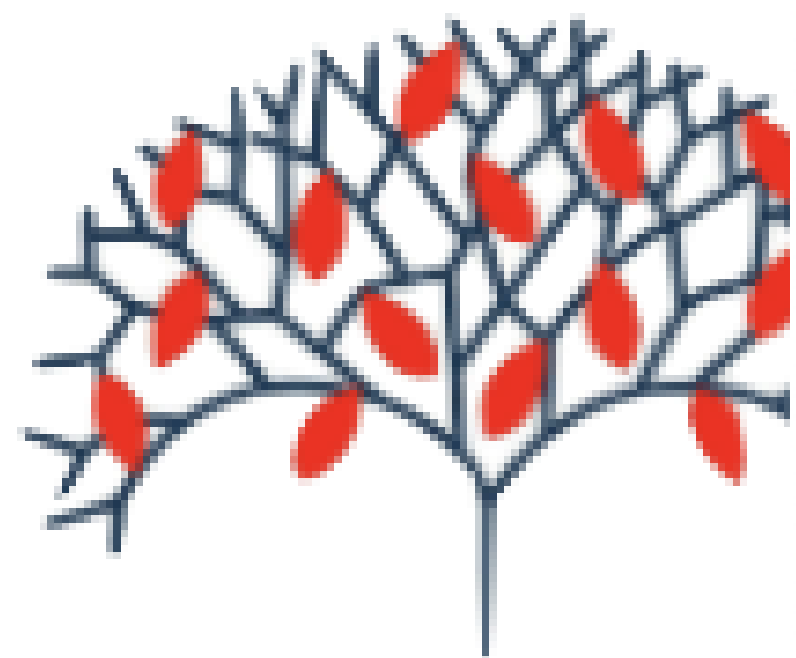
How many beads does Layla use **altogether**?



# DIVISION

Year 5

National Curriculum Objectives: Division objectives from Multiplication and Division Strand	Key Skills/ other linked NC Objectives	Key Vocabulary
<ul style="list-style-type: none"><li>• Divide numbers mentally, drawing upon known facts.</li><li>• Divide numbers up to 4 digits by a one-digit number using short division and interpret remainders appropriately for the context.</li><li>• Divide whole number and those involving decimals by 10, 100 and 1,000.</li><li>• Solve problems using division and a combination of the four operations.</li></ul>	<ul style="list-style-type: none"><li>• Identifying all factor pairs of a number and common factors of 2 numbers.</li><li>• Know and use vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</li><li>• Establish whether a number up to 100 is prime and recall prime numbers up to 19.</li></ul>	<p><i>Previous vocabulary, plus:</i></p> <p>Quotient, prime number, prime factors, common factor, composite (non-prime) number</p>



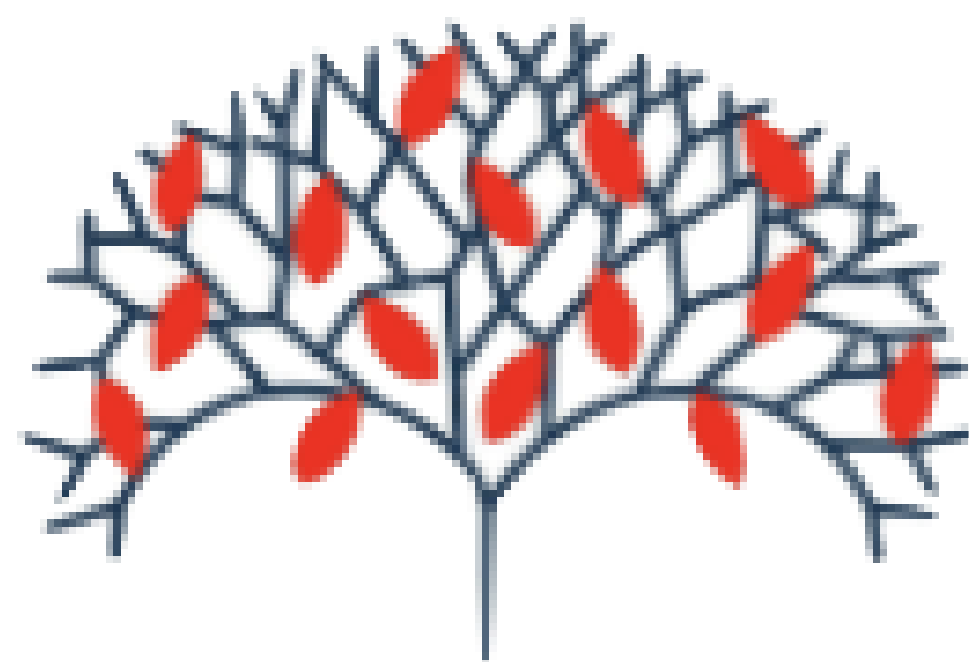
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# DIVISION

Year 6



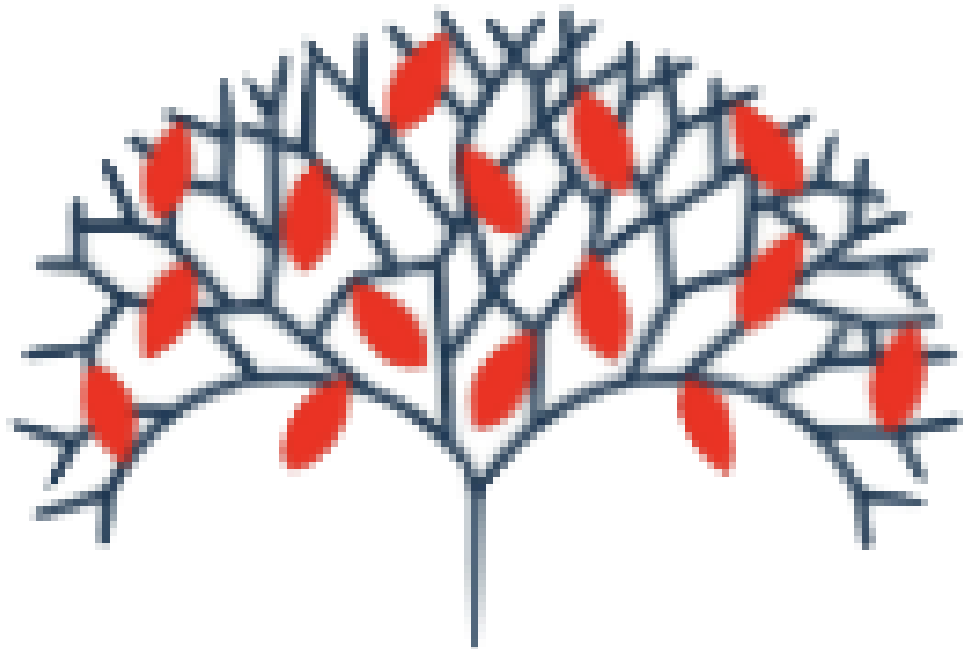
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National Curriculum Objectives: Division objectives from Multiplication and Division Strand	Key Skills/ other linked NC Objectives	Key Vocabulary
<ul style="list-style-type: none"><li>• Divide numbers up to 4 digits by a two-digit whole number using long division and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context.</li><li>• Divide numbers up to 4 digits by a two-digit whole number using short division where appropriate, interpreting remainders as appropriate to the context.</li><li>• Perform mental calculations including with mixed operations and large numbers.</li><li>• Use estimation to check answers to calculations.</li><li>• Solve problems involving addition.</li><li>• Use knowledge of order of operations to carry out calculations involving the four operations.</li></ul>	<ul style="list-style-type: none"><li>• Identify common factors and prime numbers.</li><li>• Use estimation to check answers to calculations.</li></ul>	<i>Consolidate all previous vocabulary.</i>

## Y5 Children should:

- Be given the opportunity to continue to explore division in an increasingly wide range of real-life problems.
- They should consolidate and extend their use of short division, to include those calculations with remainders in their final answers.
- Significant time and teaching should be spend considering the meaning of those remainders and how they should be presented and interpreted, as this will enable children to have a more secure understanding in preparation for more complex problem solving in Year 6.

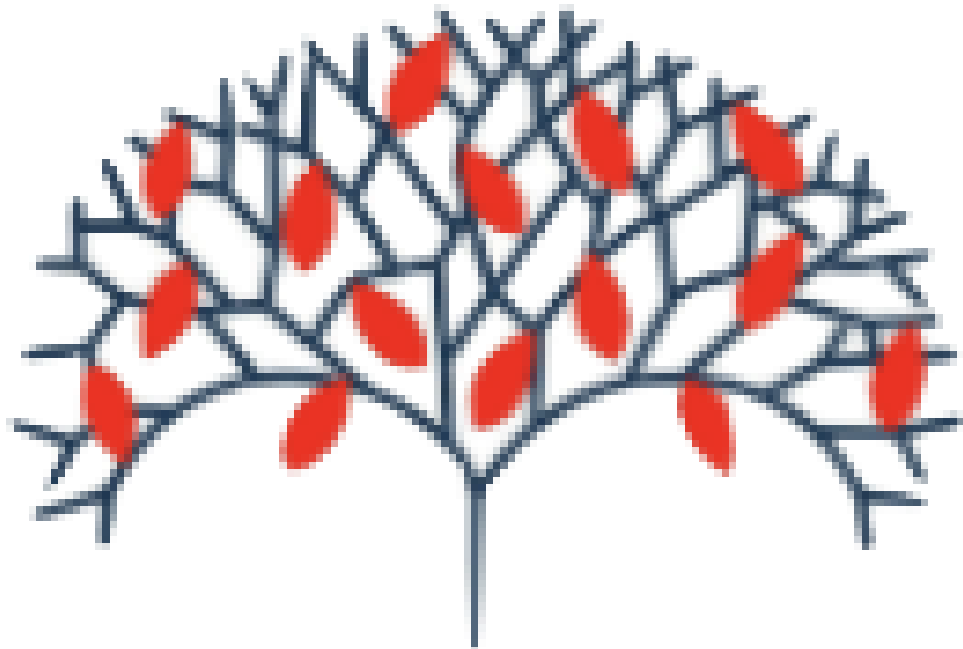


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## Y6 Children should:

- Be given the opportunity to develop their division skills in a range of contexts, with a focus on presenting their remainders appropriately for the context.
- Learn to use long division to divide by two-digit numbers, and use these methods efficiently.



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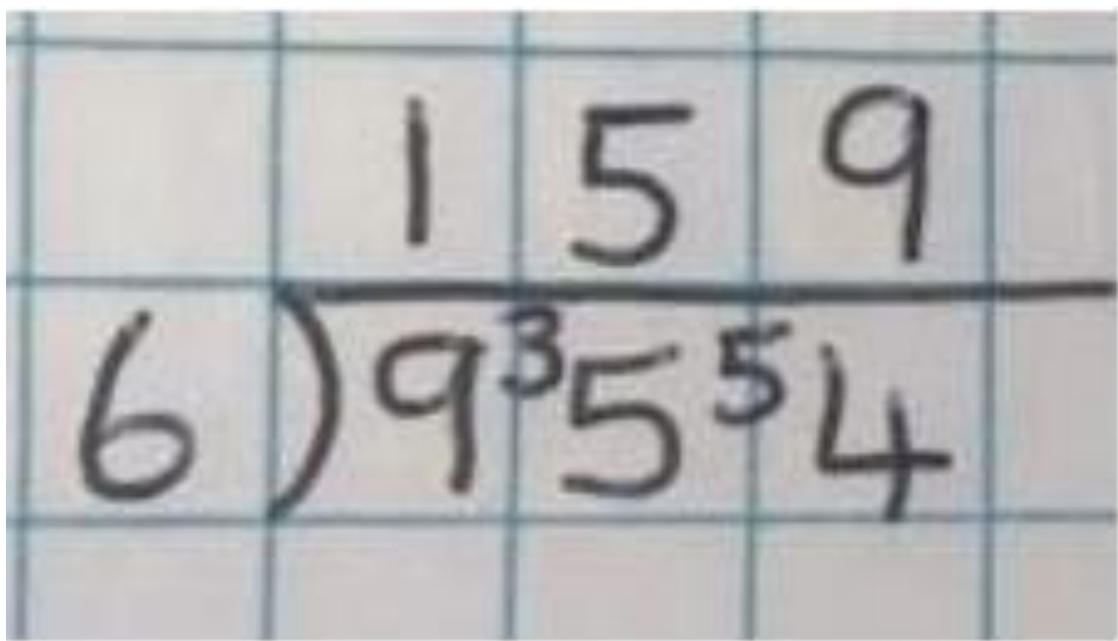


## Mental Methods:

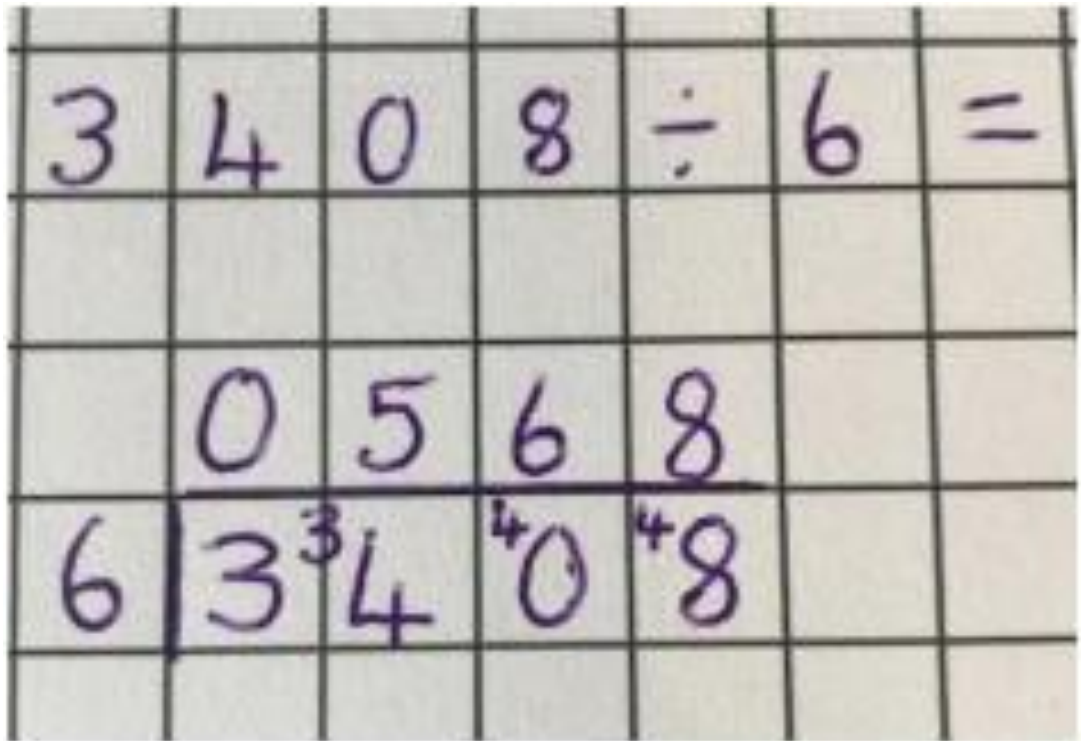
- Counting in steps of powers of 10.
- Recall division facts for all the times tables, up to 12X12
- Use understanding of place value and what happens to the value of each digit when it is divided by 10, 100 or 1,000.
- Use known facts and place value to solve calculations.
- Use related facts to divide
- Use factor pairs to divide
- Scaling down using known facts
- Use knowledge of division facts e.g. when carrying out a division to find a remainder.
- Use the relationship between multiplication and division.
- Counting in steps of powers of 10.
- Recall division facts for all the times tables, up to 12X12
- Use understanding of place value and what happens to the value of each digit when it is divided by 10, 100 or 1,000.
- Use known facts and place value to solve calculations.
- Use knowledge of division facts e.g. when carrying out a division to find a remainder.
- Use factor pairs to divide
- Use the relationship between multiplication and division
- Consolidate all previously taught strategies.

Written Methods:

Step 1: Dividing numbers with up to 4-digits by a one-digit number with no remainders in the final answer

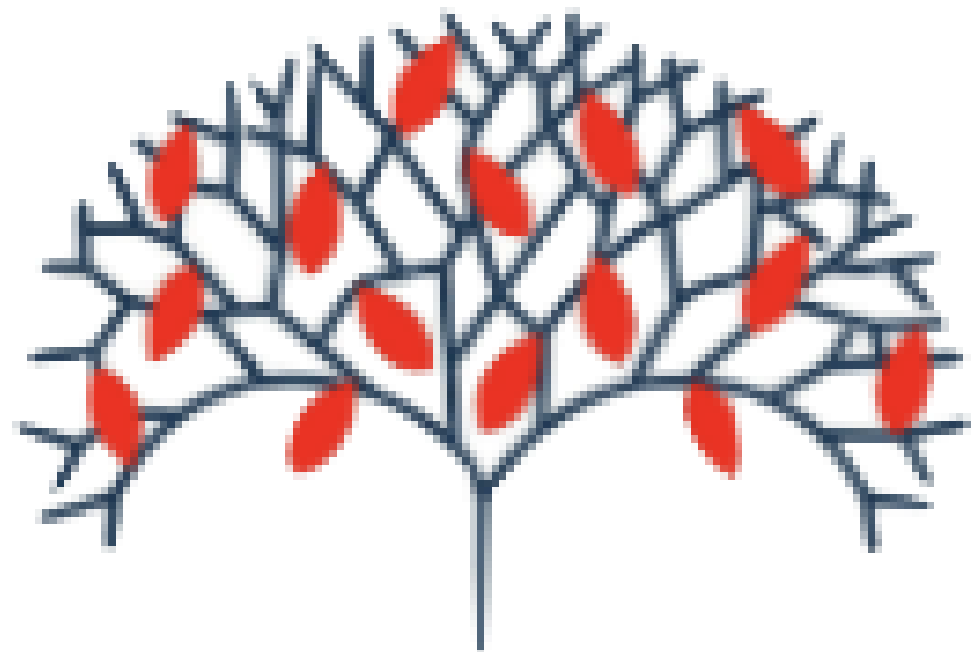


A handwritten division problem on grid paper. The divisor 6 is written to the left of the dividend 159. A horizontal line is drawn under the dividend. The quotient 26 is written above the line, with the 2 aligned under the 1 and the 6 aligned under the 9.



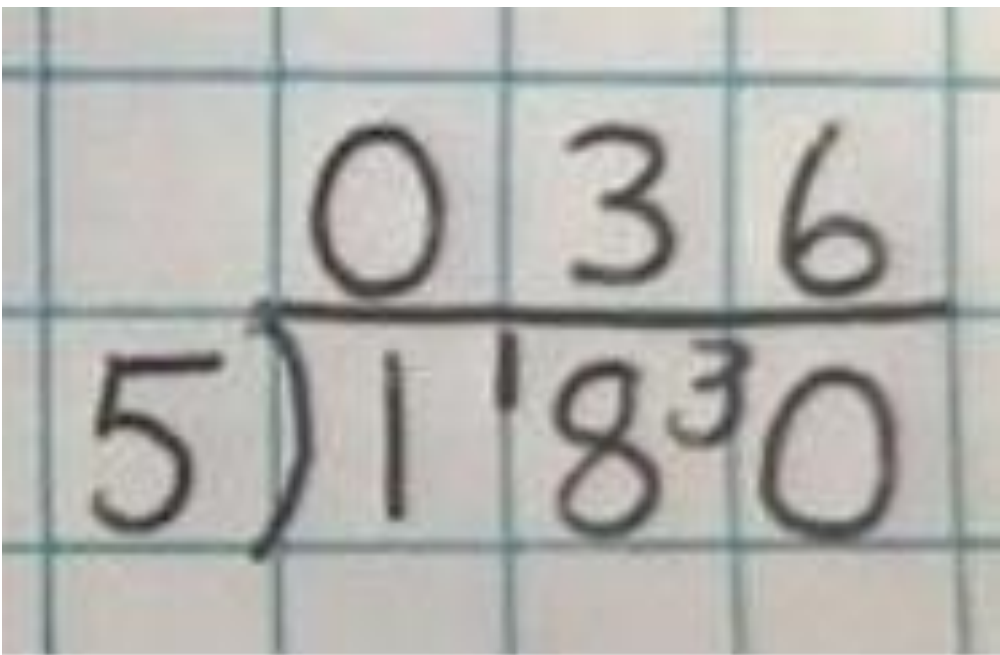
A handwritten division problem on grid paper. The divisor 6 is written to the left of the dividend 3408. A horizontal line is drawn under the dividend. The quotient 568 is written above the line, with the 5 aligned under the 3, the 6 aligned under the 4, and the 8 aligned under the 8.

Children move into dividing numbers with up to 3 digits by a one-digit number in a wide range of contexts. At this stage this will not include calculations which result in a final answer with a remainder. However, this could be taught as an extension for children who have exceeded this objective.



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Where the answer to the first column is 0, children should initially write 0 above to acknowledge this, then carry to number over to the next digit as a remainder.



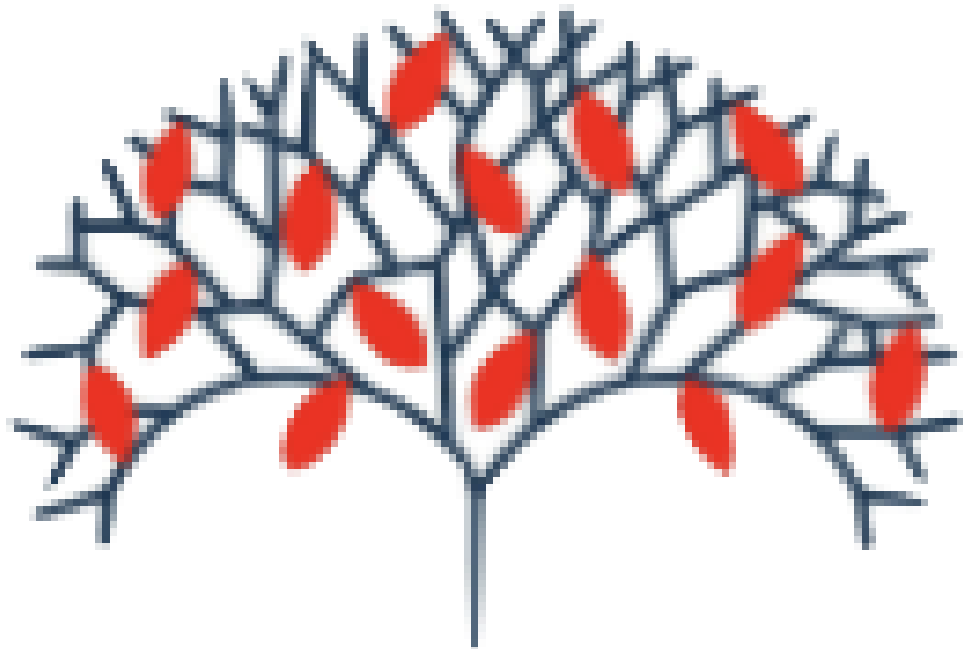
A handwritten division problem on grid paper. The divisor 5 is written to the left of the dividend 1830. A horizontal line is drawn under the dividend. The quotient 366 is written above the line, with the 0 above the 1, the 3 above the 8, and the 6 above the 3.



Written Methods:

Step 1: Dividing numbers with up to 4-digits by a one-digit number with no remainders in the final answer

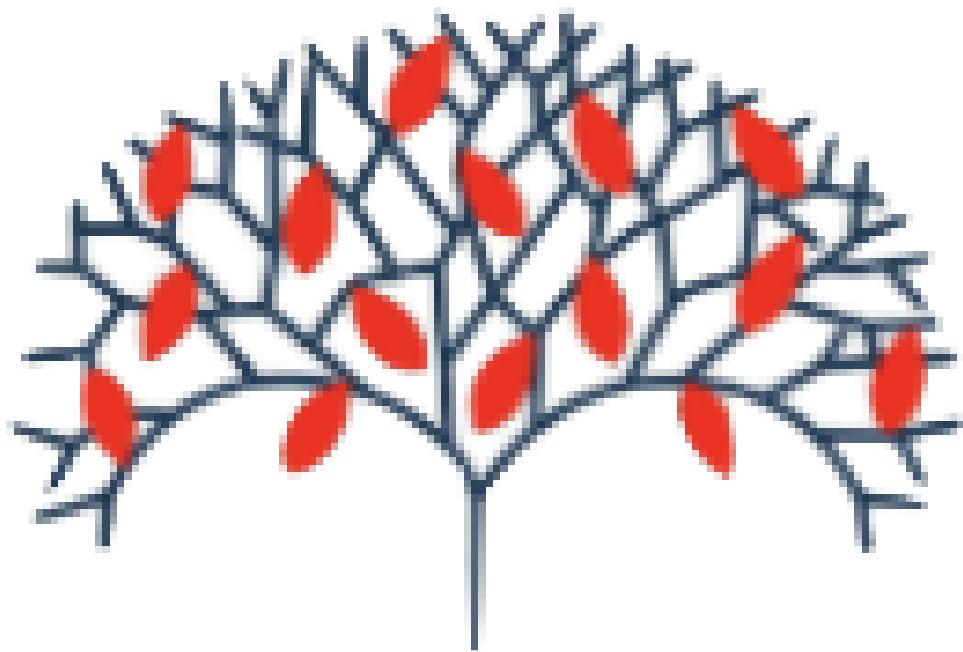
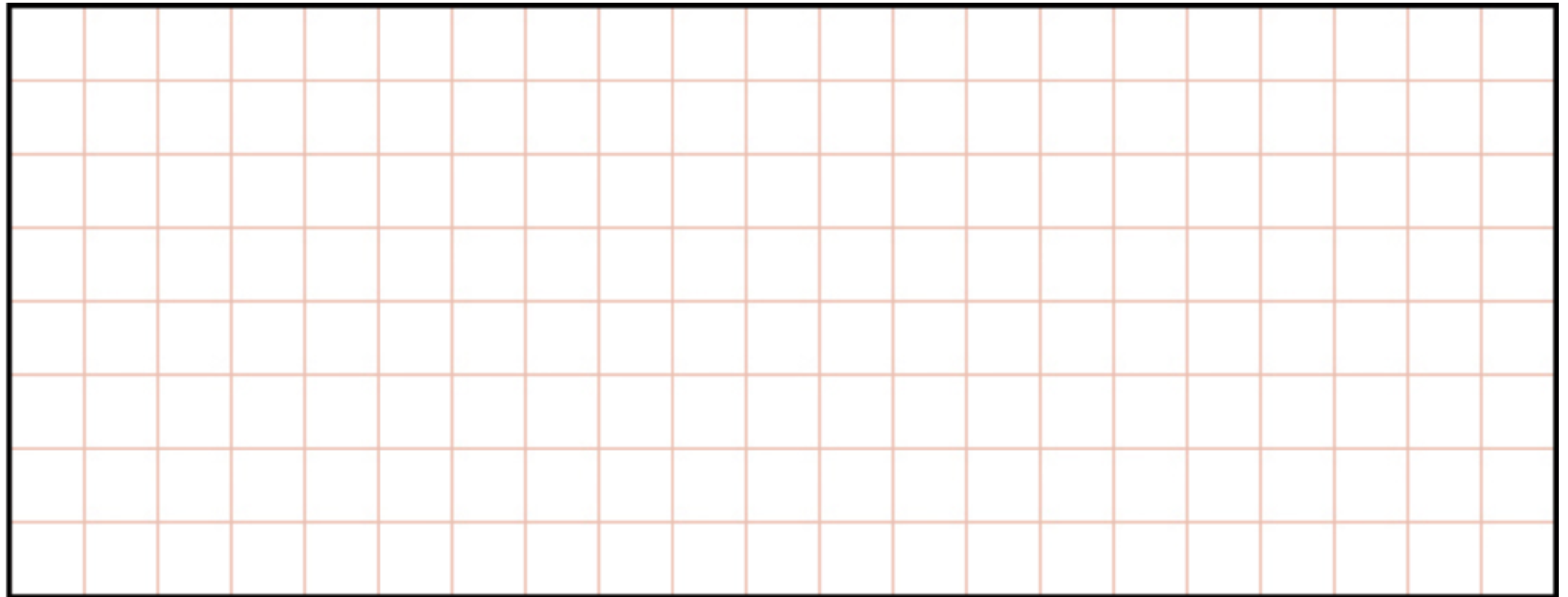
= 240 ÷ 8



## Written Methods:

Step 1: Dividing numbers with up to 4-digits by a one-digit number with no remainders in the final answer

$$581 \div 7 = \boxed{\phantom{000}}$$



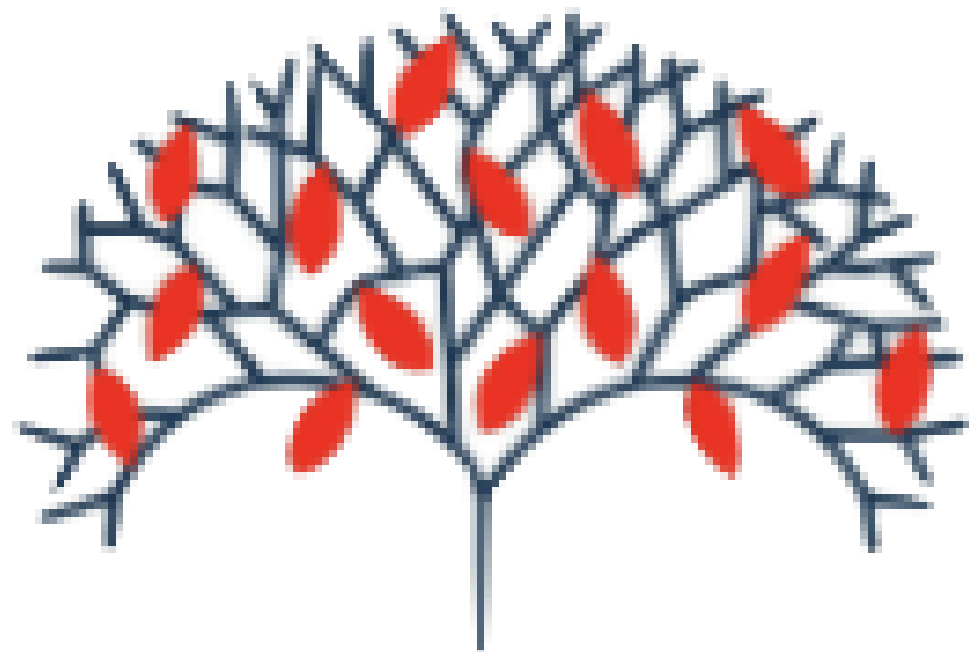
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## Step 2: Short division with remainders.

Children are introduced to examples that have remainders within the final answer. Children should be given the opportunity, through specific teaching and modelling, to consider the meaning of the remainder and how it should be expressed (i.e. as a fraction, a decimal, or as a rounded number, depending on the context of the problem).



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$$\begin{array}{r} 0456 \text{ r } 3 \\ 6 \overline{) 227339} \\ \hline \end{array}$$

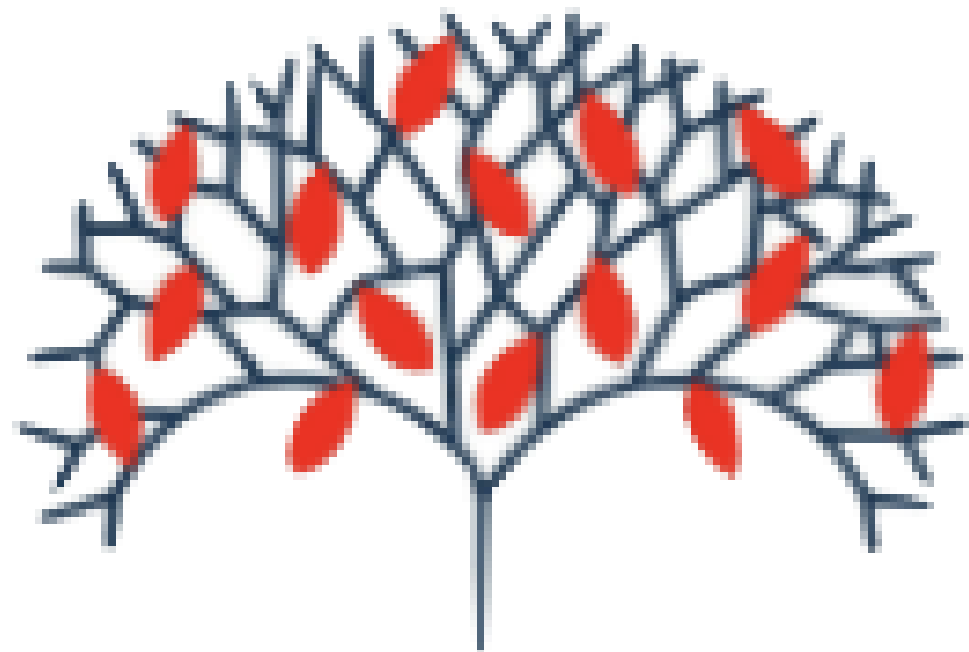
$= 456 \frac{3}{6}$  or  $456 \frac{1}{2}$

$$\begin{array}{r} 0456.5 \\ 6 \overline{) 227339.0} \\ \hline \end{array}$$

## Written Methods:

### Step 1: Extend use of short division for dividing by one-digit numbers

Children continue to develop their use of short division and how to express remainders as whole numbers, fractions, rounded numbers and decimals. Specific teaching to take place to support children in understanding each of these and when they should be used.



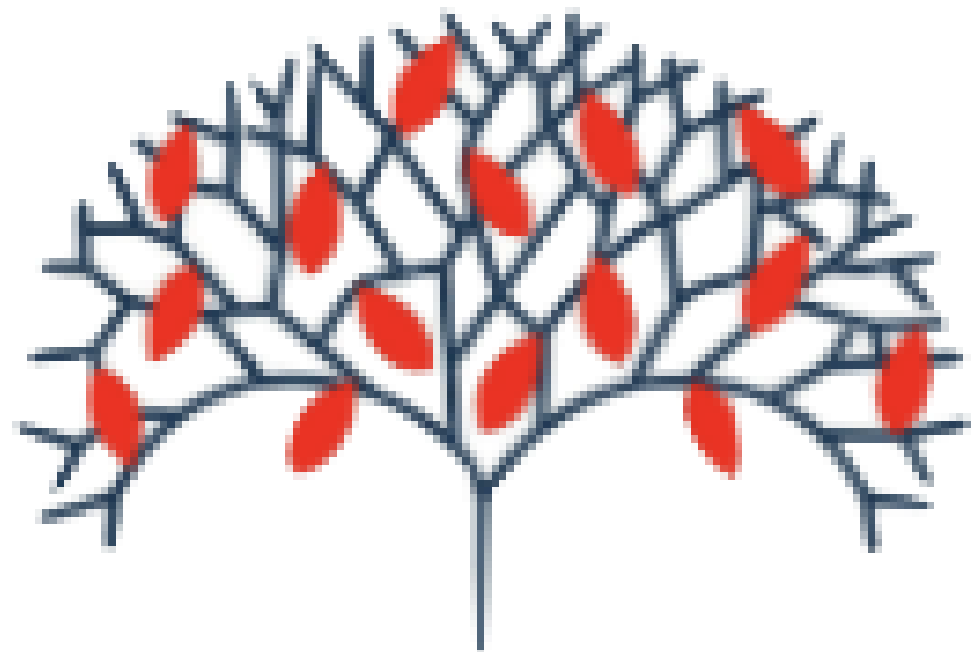
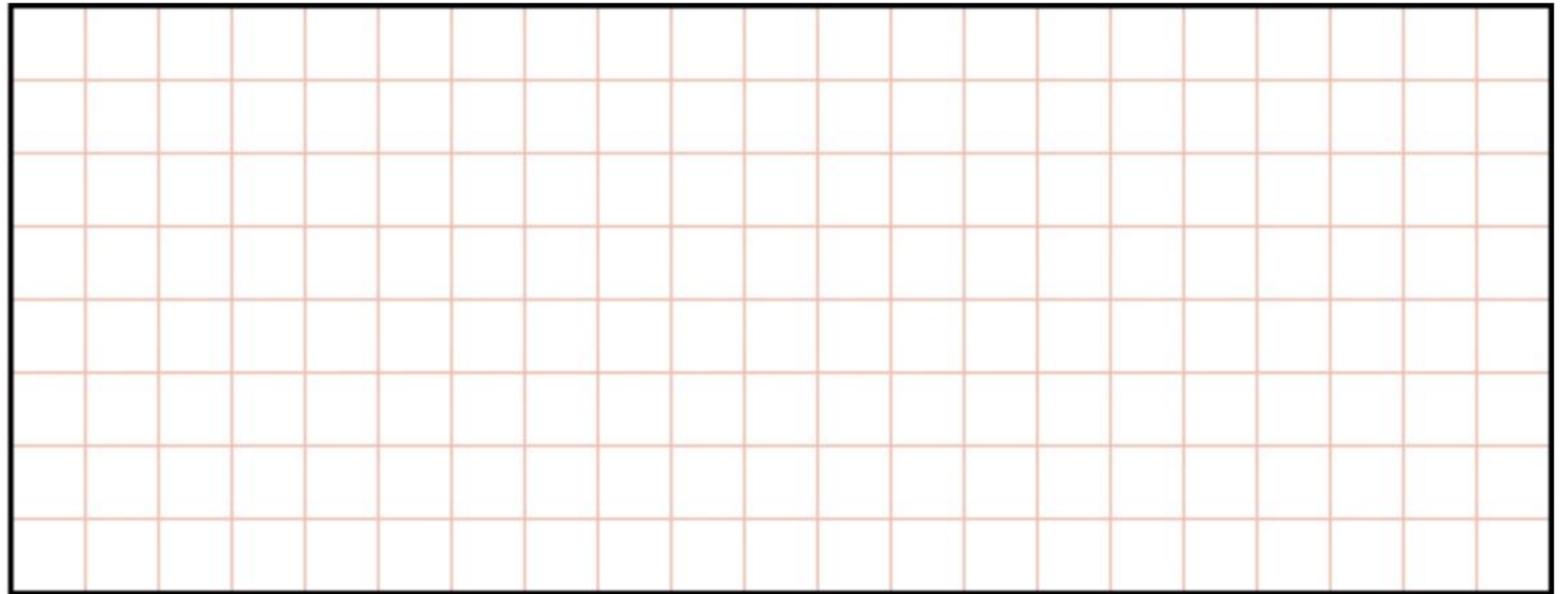
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The image shows three examples of short division written on a blue grid background. The first example shows 6521 divided by 8, with a quotient of 815 and a remainder of 1. The second example shows 815 divided by 8, with a quotient of 101 and a remainder of 7. The third example shows 6521.0200 divided by 8, with a quotient of 815.125. The numbers are written in black ink, and the division is performed using the standard short division method with a horizontal line for the divisor and a vertical line for the dividend. The remainder is indicated by 'r' and the decimal point is indicated by a dot.
$$\begin{array}{r} 815 \text{ r } 1 \\ 8 \overline{) 6521} \end{array}$$
$$815 \frac{1}{8}$$
$$\begin{array}{r} 815.125 \\ 8 \overline{) 6521.0200} \end{array}$$

Step 2: Short division with remainders.

$$4,818 \div 5 =$$



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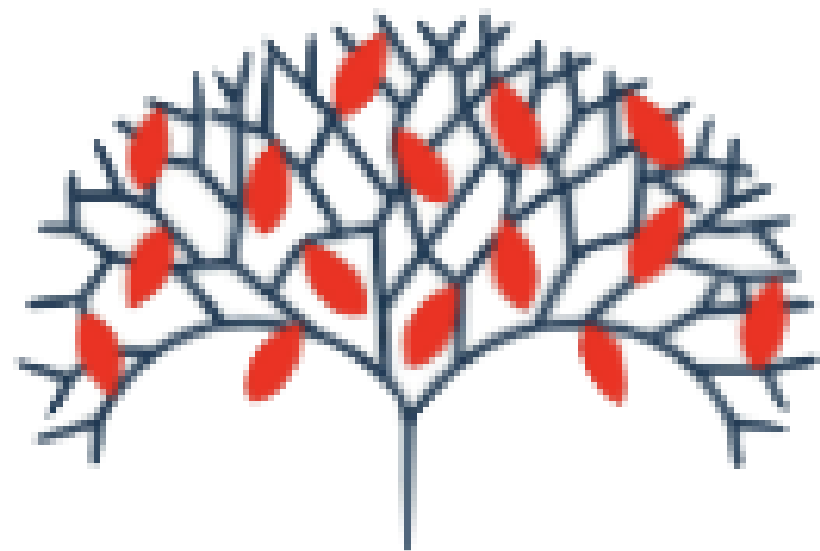
# Step 2: Dividing by two-digit numbers

## Long Division - 'Chunking Method'

Supported by their secure understanding of the division learning done previously, children should be introduced to long division by chunking. Children should be taught how to set this out clearly, including noting down multiples of the number to support this process. They should be encouraged to take away the largest 'chunk' they can each time to limit the number of steps and therefore likely errors. Children should aim to get to the answer in a maximum of 2 steps.

Handwritten long division using the chunking method for  $2757 \div 13$ . The quotient is 212 with a remainder of 1. The steps shown are:

$$\begin{array}{r} 212 \text{ r}1 \\ 13 \overline{) 2757} \\ \underline{- 2600} \quad (13 \times 200) \\ 157 \\ \underline{- 156} \quad (13 \times 12) \\ 1 \end{array}$$



Lindow

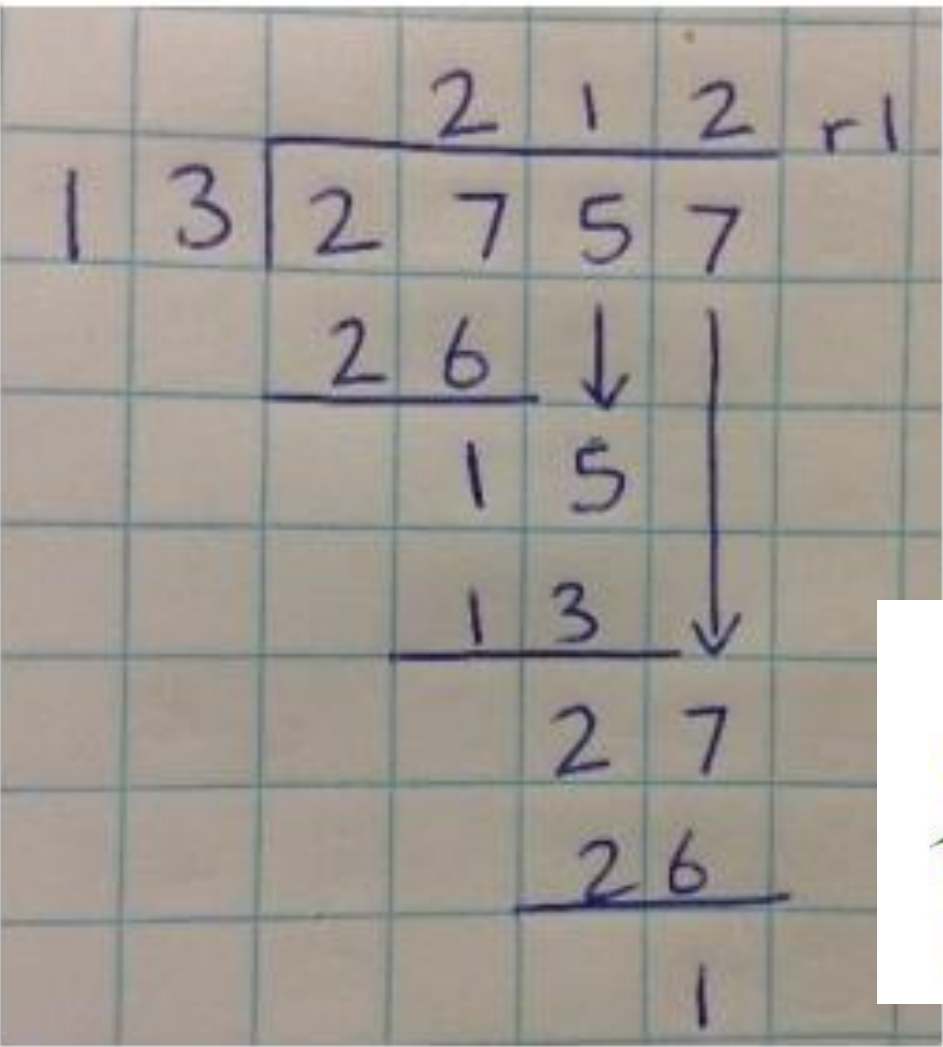
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$13 \times 1 = 13$	$13 \times 20 = 260$
$13 \times 2 = 26$	$13 \times 30 = 390$
$13 \times 3 = 39$	$13 \times 40 = 520$
$13 \times 4 = 52$	$13 \times 50 = 650$
$13 \times 5 = 65$	$13 \times 60 = 780$
$13 \times 6 = 78$	
$13 \times 7 = 91$	$13 \times 100 = 1300$
$13 \times 8 = 104$	$13 \times 200 = 2600$
$13 \times 9 = 117$	
$13 \times 10 = 130$	



# Formal Method for Long Division

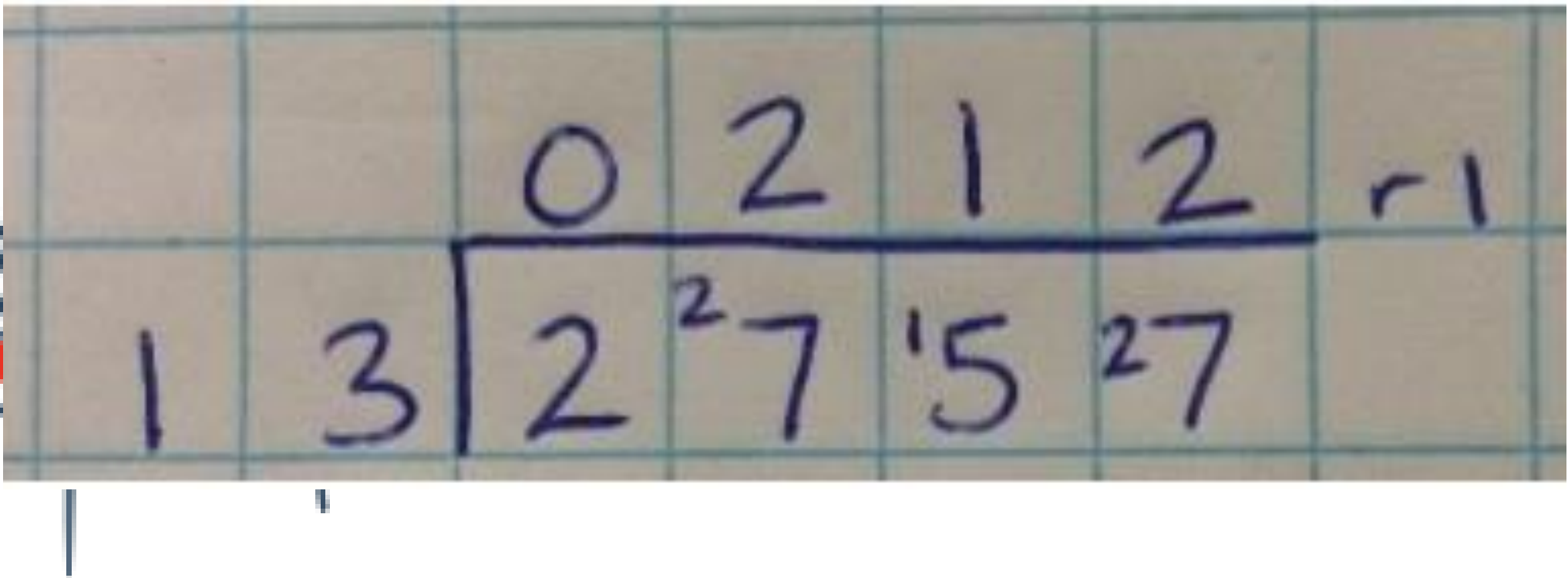
When the children have a clear understanding of the place value within their division calculations, they can move onto a formal method for long division. This reduces the amount of related facts that they need to use, and therefore will improve their efficiency.



Divide  
Multiply  
Subtract

Divide  
Multiply  
Subtract  
Check  
Bring down

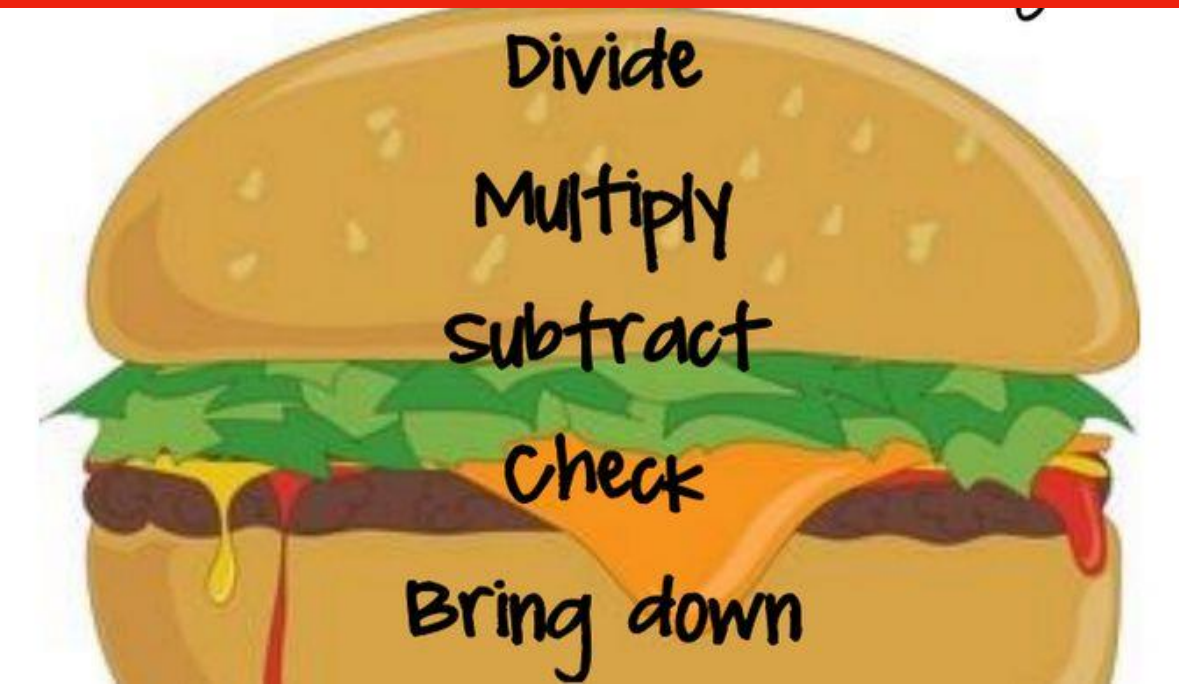
## Step 3: Using Short Division to divide by two-digit numbers



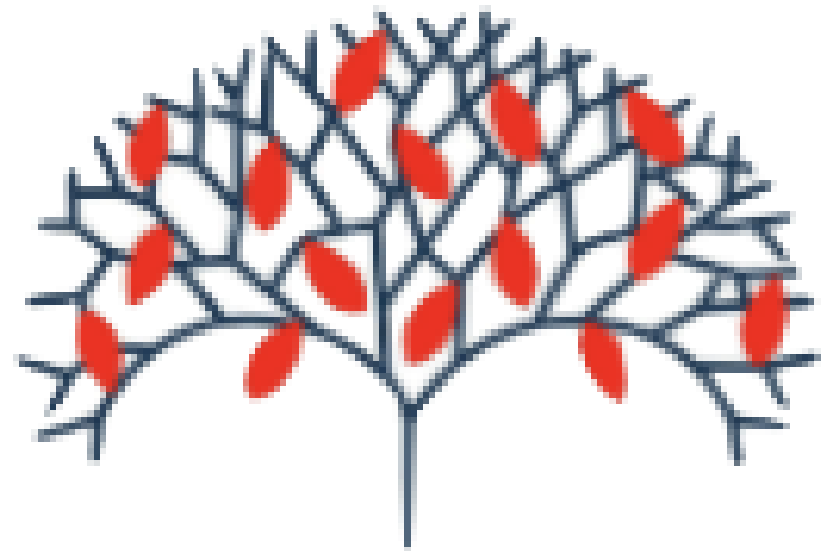
When children are fully secure with long division for dividing by a two-digit number, they may progress to a short division method. Be aware that there are multiple parts to each step and therefore children may make errors if they rush or if their understanding is not yet secure enough.

# Formal Method for Long Division

$$24 \overline{) 816}$$



**Show  
your  
method**



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$$\begin{array}{r} 18 \overline{)1692} \\ \underline{\phantom{00}18} \\ \phantom{00}92 \\ \underline{\phantom{000}18} \\ \phantom{000}2 \\ \underline{\phantom{0000}0} \end{array}$$
$$\begin{array}{r} 17 \overline{)1122} \\ \underline{\phantom{00}00} \\ \underline{\phantom{00}00} \\ \underline{\phantom{00}00} \\ \underline{\phantom{00}00} \end{array}$$
$$16 \overline{) 912}$$
$$\begin{array}{r} 10 \overline{)650} \\ \underline{\phantom{00}} \\ \underline{\phantom{00}} \\ \underline{\phantom{00}} \end{array}$$
$$11 \overline{) 935}$$

13	26	39	52	65	78	91	104	117
----	----	----	----	----	----	----	-----	-----

		13	2	7
			3	


[illegible]

		13	7	9	3

13 | 8 7 1

23	46	69						
----	----	----	--	--	--	--	--	--

=



# Multiplying & Dividing by 10, 100 and 1000

a) Draw counters on the place value charts to represent the answer to each calculation.

$$4.4 \times 1$$

Th	H	T	O	Tth	Hth

$$4.4 \times 10$$

Th	H	T	O	Tth	Hth

$$4.4 \times 100$$

Th	H	T	O	Tth	Hth

$$4.4 \times 1,000$$

Th	H	T	O	Tth	Hth

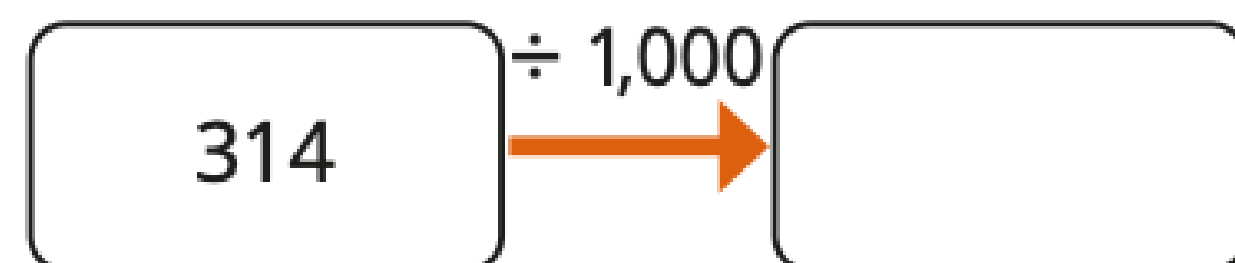
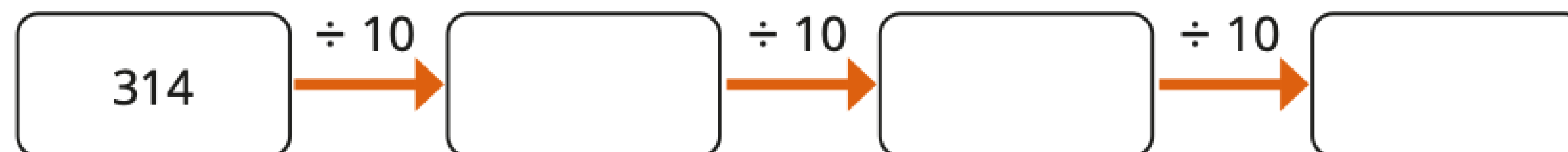
6 Write  $>$ ,  $<$  or  $=$  to compare the multiplications.

$$1.4 \times 10 \times 10 \times 10 \quad \bigcirc \quad 1.4 \times 1,000$$

$$1.4 \times 10 \times 100 \quad \bigcirc \quad 1.4 \times 1,000$$

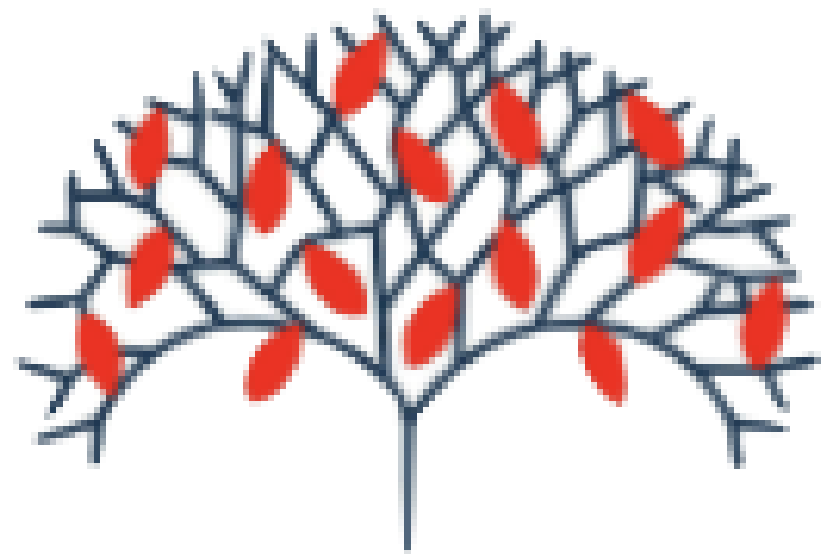
$$1.4 \times 10 \times 10 \quad \bigcirc \quad 1.4 \times 1,000$$

Complete the diagrams.



# Multiplication & Division in the wider maths curriculum

- Fractions – equivalents, multiply fractions by fractions, multiply fractions by integers
- Decimals
- Conversion between fractions, decimals and percentages
- Converting units
- Area, Volume of shapes
- Ratio
- Statistics - mean



**Lindow**

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Primary School



# Year 5 Practising Number and Calculation Skills at Home

## - Building Fluency -

Autumn Term

Circle which fractions of ☆ you can find that will give you a whole number.

1/2    1/3    1/4    1/5    1/6

Write ☆ in words.

\_\_\_\_\_

Divide ☆ by 10 and then complete the sequence.

□ ← □ ← □ ← ☆ → □ → □

-11    -12    -9    +7    +16

Convert these measures:

☆ cm = □ m

☆ g = □ kg

☆ mins = □ hours □ mins

Round ☆ to the nearest 100 \_\_\_\_\_

nearest 1000 \_\_\_\_\_

What could the sides of an isosceles triangle be if the perimeter was ☆?

What could the sides of a rectangle be if the perimeter was ☆?

☆ × 5

□

+ 235

□

- 800


□

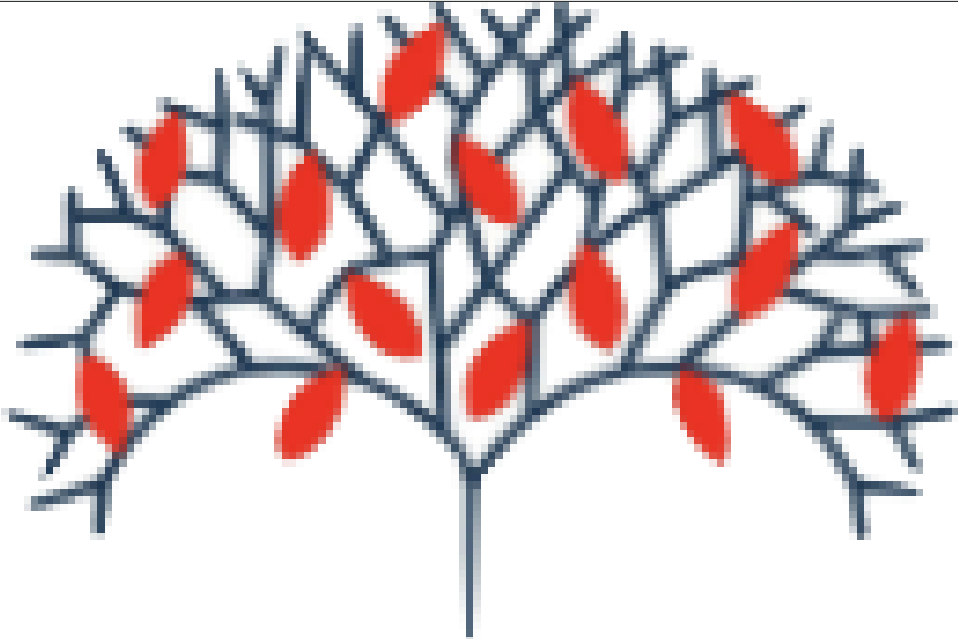
(Number range 1000 +)

☆ ÷ 1000 =

Round to the nearest 10.

\_\_\_\_\_





Spring Term

Divide ☆ by 9

Use short division

Take all the digits from ☆. Use all the digits to create as many 4-digit numbers as you can. Order those numbers from smallest to largest

Identify factors of ☆

Multiply ☆ by 14

Use a formal written method

(Number range 1000 +)

☆ ÷ 10 =

☆ ÷ 100 =


☆ ÷ 1000 =

□ × □ < ☆

Show your workings

☆ × 2 → □ → □ → □ → 1000

+ 200



Summer Term

☆ grams = □ kg

☆ cm = □ m

Use the digits in ☆ to make as many different numbers with up to 2 decimal places. Order them from smallest to largest.

Make the statement below correct.

☆ + 2307 > ☆ - □ × 10

☆ + 1/2 ☆ = □

30 465 - 1/4 ☆ = □

(Number range 1000 +)


Divide ☆ by 7

up to 2d.p.

□ × □ < ☆ × 10

Show your workings

☆ is □ less than 1 000 000



# Year 6 Practising Number and Calculation Skills at Home

- Building Fluency -

Autumn Term

Start with	★
Divide it by 10	
Multiply your answer by 5	
Round the answer to the nearest 10	
Subtract $\frac{1}{2}$ of the answer	

Work out the value of each part.

★	$\times 10$	$\times 100$	$\times 1000$

Use the digits 2 3 4 5 6 to make a written multiplication calculation that will give you the closest product to

★

Insert > < or = in between each of these calculations


$\frac{2}{3}$  of ★  ★ -  $\frac{1}{8}$  of ★

★  $\div 100$    $\frac{9}{10}$  of ★

★ multiplied by weeks in the year =

Days in the year multiplied by ★ =  + 299

(Number range 1000 +)





Spring Term

What are the factors of

★

Circle the factors that are prime

12 % of ★ =

Find 3 more percentages of the star number using this fact.

Multiply ★ by 27

★ g =  kg

★ cm =  m


(Number range 1000 +)

★ divided by the last two digits of ★ up to 2 d.p.

★

$\frac{1}{8}$

$\frac{3}{4}$



Summer Term

Draw a composite rectilinear shape (not to scale) with an area of

★

For every ★ children in a school there are 0.125 adults. How many adults are in the school?

Multiply ★ by 43

★ ml =  l


★ miles =  km

(Number range 1000 +)

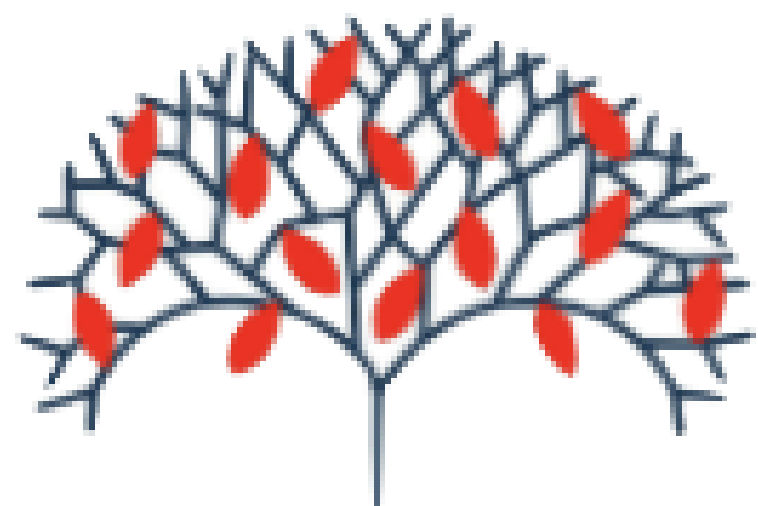
True or False

25% of ★ is less than 35% of  $\frac{1}{2}$  of ★

★ multiplied by the last two digits of ★



# End of Year Objectives – Year 5



**Lindow**

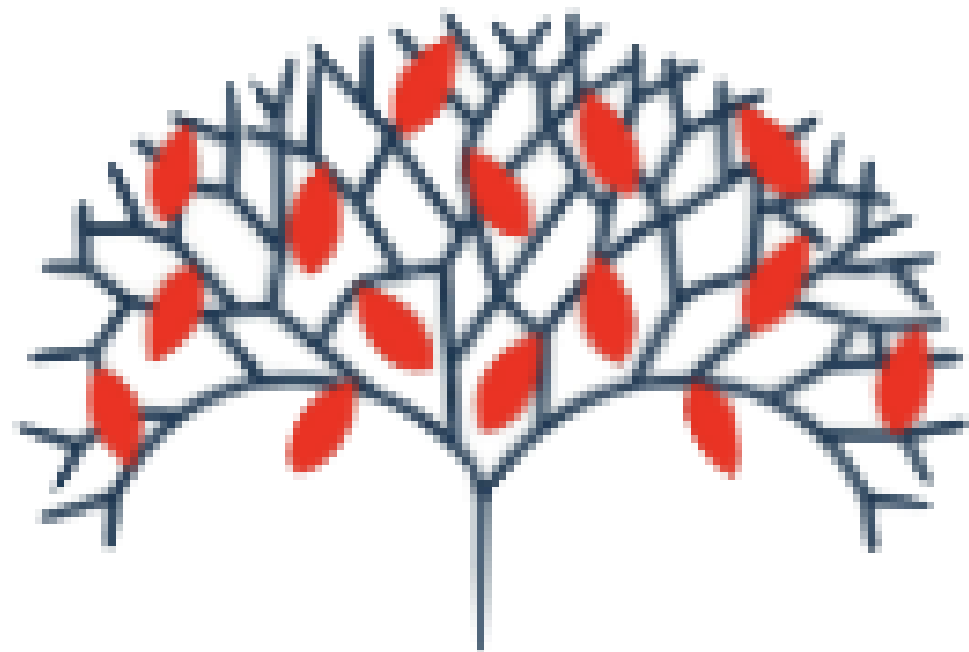
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# End of Year Objectives – Year 6

## Useful websites & links:

- <https://doodlelearning.com>
- <https://www.thenational.academy>
- <https://www.bbc.co.uk/bitesize>
- <https://www.cgpbbooks.co.uk>
- <https://whiterosemaths.com/parent-resources>



**Lindow**

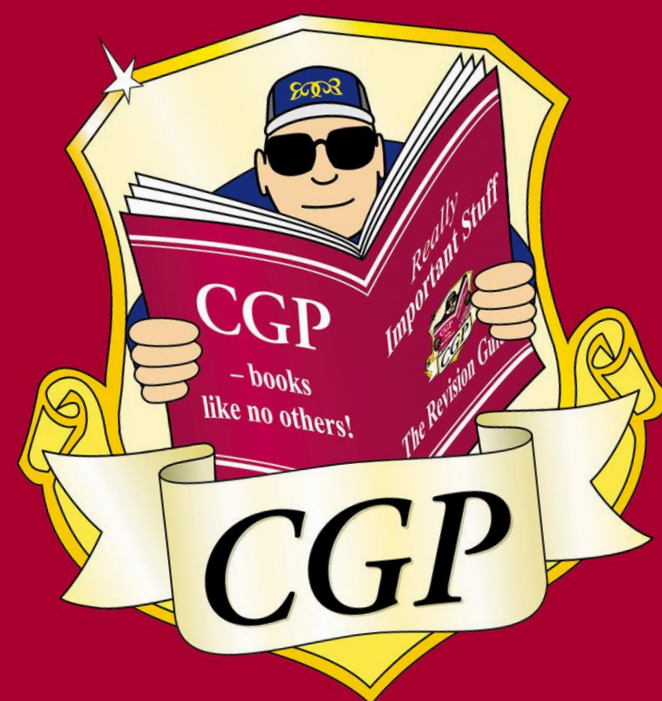
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- <https://doodlele>
- <https://www.the>
- <https://www.bbc>
- <https://www.cgpk>

CGP

# Key Stage Two Maths



The Study Boo

Ages  
7-11

Name: .....

Class: .....

# Key Stage Two Maths



Year 6

Targeted Question B

Ages  
10-11

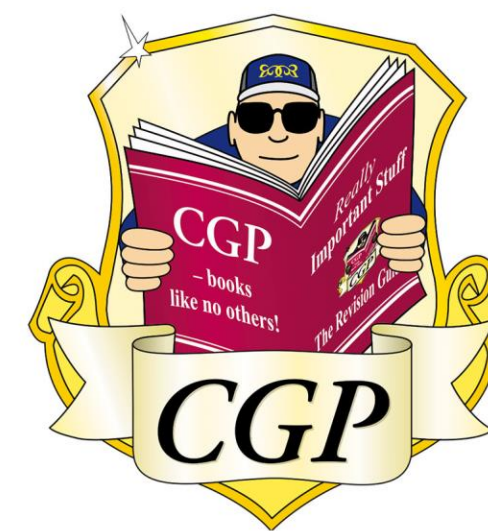
e supported

ites

Name: .....

Class: .....

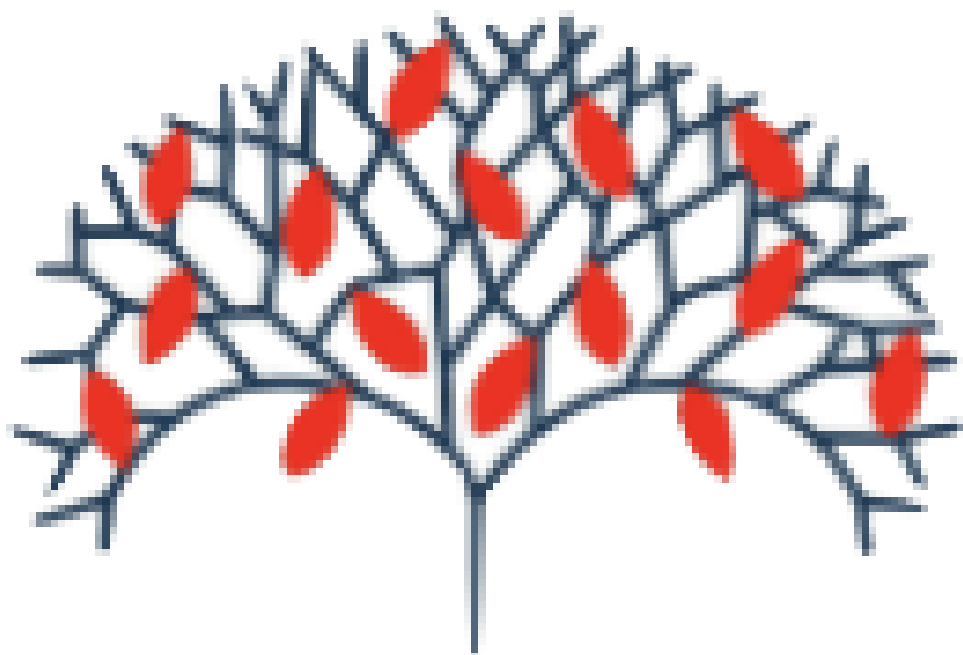
# Key Stage Two Maths



Year 5

Targeted Question Book

Ages  
9-10



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How can this stage be supported  
at home?  
Useful Websites

- <https://doodlelearning.com>
- <https://www.thenational.academy>
- <https://www.bbc.co.uk/hitsize>
- <https://www.cgpb.com>
- <https://whiterosemaths.com>



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## Get the free workbooks

Year 1

Year 2

Year 3

Year 4

Year 5

Year 6



Autumn Block 1  
Place value



Autumn Block 2a  
Four operations (a)



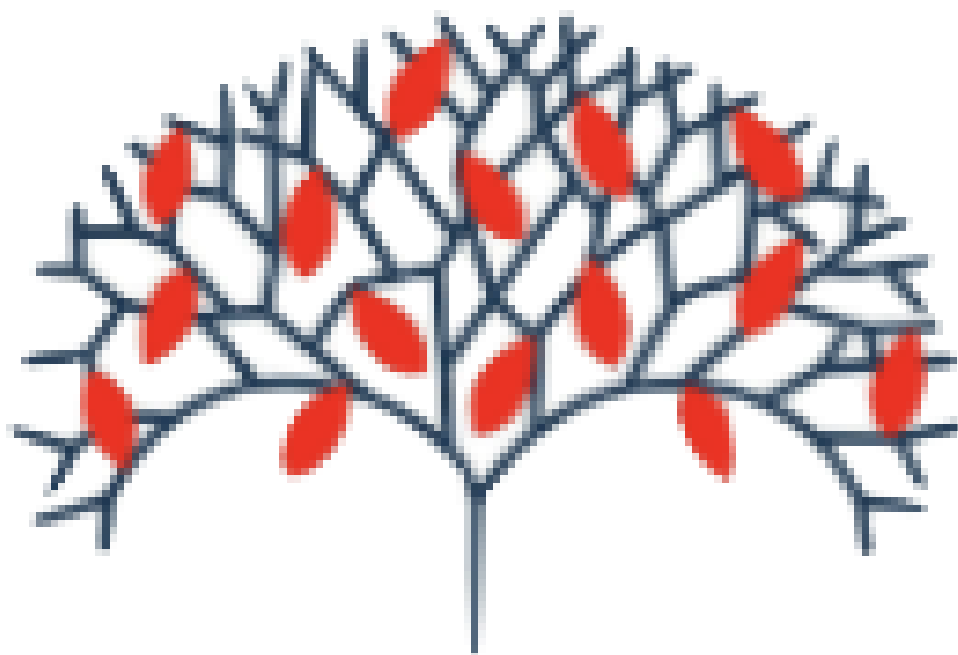
Autumn Block 2b  
Four operations (b)



Autumn Block 3a  
Fractions (a)



Autumn Block 3b  
Fractions (b)



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