

Steps to Success

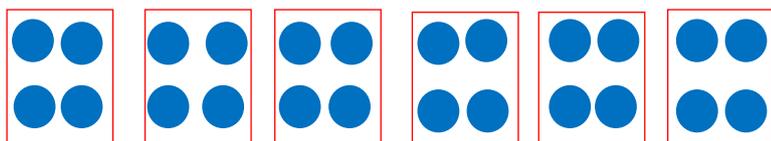
Date												
Subject/s	<u>Maths</u>											
Learning Objective 	To use short division											
	SA 	TA 										
Success Criteria 	I can put the first number inside the bus stop											
	I can put the number I am dividing by on the outside											
	I can write remainders next to correct digits											
Support	Independent	Adult Support ()	Group Work									
Pre-task: Calculate using short division. <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; display: inline-block; text-align: center;"> <table border="1" style="border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;">5</td></tr> <tr><td style="width: 20px; height: 20px;">7</td></tr> <tr><td style="width: 20px; height: 20px;">2</td></tr> <tr><td style="width: 20px; height: 20px;">5</td></tr> </table> </div> <div style="border: 1px solid black; padding: 5px; display: inline-block; text-align: center;"> <table border="1" style="border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;">3</td></tr> <tr><td style="width: 20px; height: 20px;">1</td></tr> <tr><td style="width: 20px; height: 20px;">9</td></tr> <tr><td style="width: 20px; height: 20px;">3</td></tr> <tr><td style="width: 20px; height: 20px;">8</td></tr> </table> </div> </div>				5	7	2	5	3	1	9	3	8
5												
7												
2												
5												
3												
1												
9												
3												
8												

Teacher Led

Before we begin short division, let's do a quick recap of dividing.

$$24 \div 4 = 6$$

I can check this with grouping. 24 split into groups of 4 makes 6 groups.

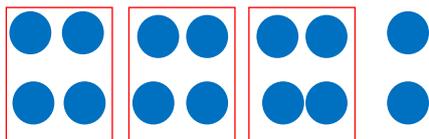


It is quicker to use my times tables though!

I know that $6 \times 4 = 24$ so I know that $24 \div 4 = 6$

What if there are some left over?

Lets try $14 \div 4 =$



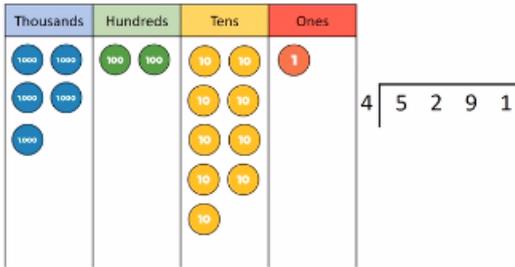
I can see 3 groups of 4 with 2 left over. We call this a remainder and write it like this:

$$14 \div 4 = 3 \text{ r}2$$

Remember times tables really help to speed it up. I know $3 \times 4 = 12$ and $14 - 12 = 2$.

For our first short division question we will be dividing by 4. It may help to write out your 4 times table

$$5,291 \div 4$$

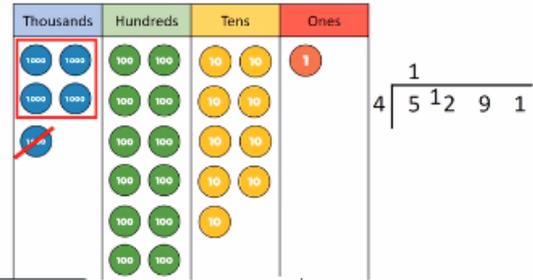


Teacher Led

We are going to use short division to divide a 4 digit number by a 1 digit number. This method is sometimes called 'bus stop'.

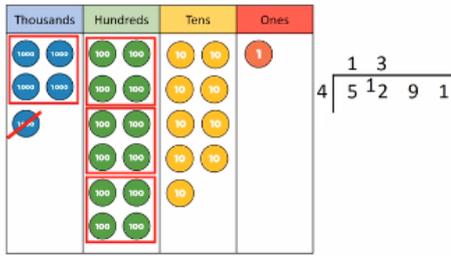
Here you can see the written method, showing 5291 inside the 'bus stop'.

Alongside it is a place value grid and counters.

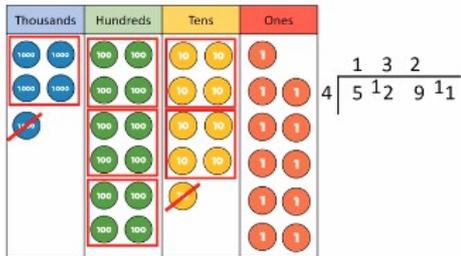


With short division we begin with the largest digit, in this number it is the thousands. So, 5 thousands divided by 4 (how many 4s are in 5). This gives an answer of 1 with 1 left over (remainder).

We can exchange this remainder into our next column—the hundreds.

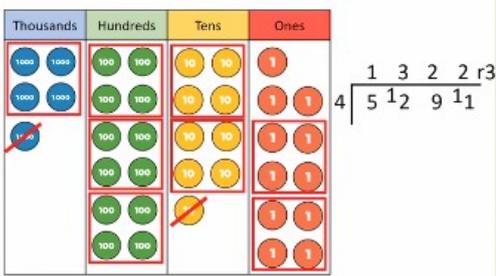


Now we need to do 12 hundreds divided by 4 = 3 hundreds.



Next we look at the tens. 9 tens divided by 4 = 2 tens with 1 remainder.

We then exchange the remaining ten for ten ones.



Finally, we look at the ones.

11 ones divided by 4 = 2 groups with 3 left over. These leftover ones are our remainder.

So the final calculation is:

$$5291 \div 4 = 1322 \text{ r}3$$

Fluency

Use the squared paper on the next page to work out these division questions.

1) $6358 \div 5 =$

2) $5469 \div 3 =$

3) $7489 \div 4 =$

4) $7652 \div 4 =$

5) $8283 \div 3 =$

6) $9625 \div 5 =$

7) $5407 \div 4 =$

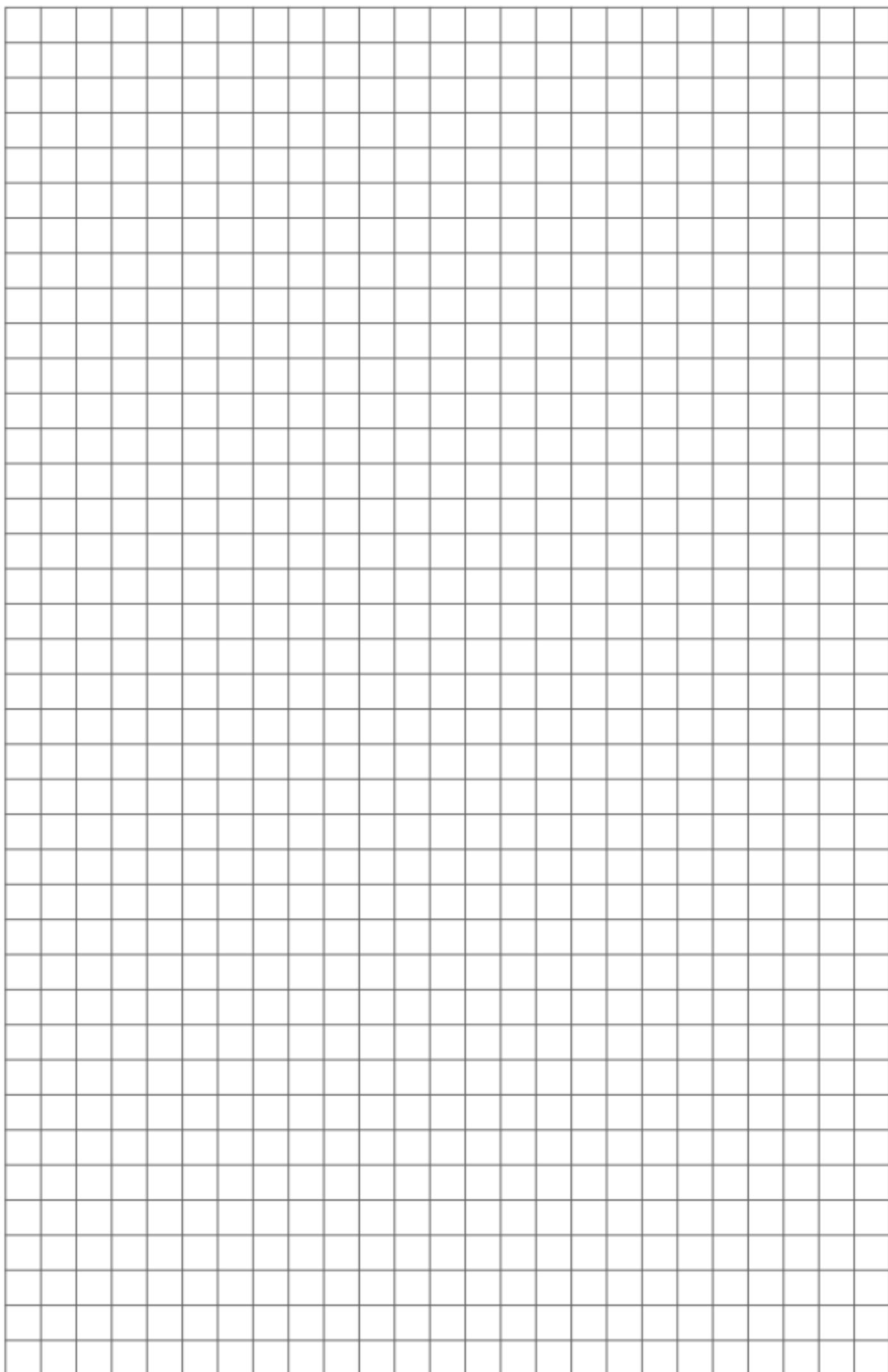
8) $9824 \div 4 =$

9) $7653 \div 5 =$

10) $4635 \div 3 =$

11) $1357 \div 4 =$

12) $2804 \div 3 =$



Fluency—Answers

$$1) \begin{array}{r} 1271 \text{ r}3 \\ 5 \overline{) 6358} \end{array}$$

$$2) \begin{array}{r} 1823 \\ 3 \overline{) 5469} \end{array}$$

$$3) \begin{array}{r} 1872 \text{ r}1 \\ 4 \overline{) 7489} \end{array}$$

$$4) \begin{array}{r} 191 \text{ r}2 \\ 4 \overline{) 7652} \end{array}$$

$$5) \begin{array}{r} 2761 \\ 3 \overline{) 82183} \end{array}$$

$$6) \begin{array}{r} 1925 \\ 5 \overline{) 94625} \end{array}$$

$$7) \begin{array}{r} 1351 \text{ r}3 \\ 4 \overline{) 5407} \end{array}$$

$$8) \begin{array}{r} 2458 \\ 4 \overline{) 9824} \end{array}$$

$$9) \begin{array}{r} 153 \text{ r}3 \\ 5 \overline{) 7653} \end{array}$$

$$10) \begin{array}{r} 1545 \\ 3 \overline{) 4635} \end{array}$$

$$11) \begin{array}{r} 0339 \text{ r}1 \\ 4 \overline{) 1357} \end{array}$$

$$12) \begin{array}{r} 0934 \text{ r}2 \\ 3 \overline{) 2804} \end{array}$$

Problem Solving and Reasoning

Jack is calculating $2,240 \div 7$

He says you can't do it because 7 is larger than all of the digits in the number.

Do you agree with Jack?

Explain your answer.

Explain it!



Explain and correct the working.

Thousands	Hundreds	Tens	Ones

	3	1	0	1
3	9	4	1	4

Explain it!



Problem Solving and Reasoning
Answers

Jack is incorrect.
You can exchange
between columns.
You can't make a
group of 7
thousands out of 2
thousand, but you
can make groups
of 7 hundreds out
of 22 hundreds.

The answer is 320

There is no
exchanging
between columns
within the
calculation.

The final answer
should have been
3,138