



# **Year Five Maths Lesson 5**



# Fluency Starter

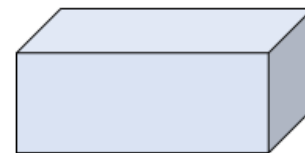
- Keep up your daily practice of 5 a day <https://corbettmathsprimary.com/5-a-day/> and challenge yourself to Bronze, Silver, Gold or Platinum!
- Or Complete Flashback 4 for your daily starter (on the next slide).
- Log on to Doodlemaths for 15 minutes each day and try and keep in the Green Zone.
- There are also some Maths activities on Purple Mash to complete.



# Fluency Starter

## Flashback 4

Year 5 | Week 3 | Day 5



- 1) Work out  $8.4 - 5.32$
- 2) Find the sum of 0.86 and 0.76
- 3) Write  $\frac{28}{50}$  as a percentage.
- 4) How many metres are there in  $6\frac{1}{2}$  km?



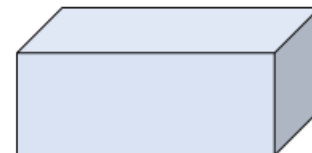
# Fluency Starter Answers

## Flashback

4

Year 5 | Week 3 | Day 5

1) Work out  $8.4 - 5.32$  **3.08**



2) Find the sum of 0.86 and 0.76 **1.62**

3) Write  $\frac{28}{50}$  as a percentage. **56%**

4) How many metres are there in  $6\frac{1}{2}$  km? **6,500**



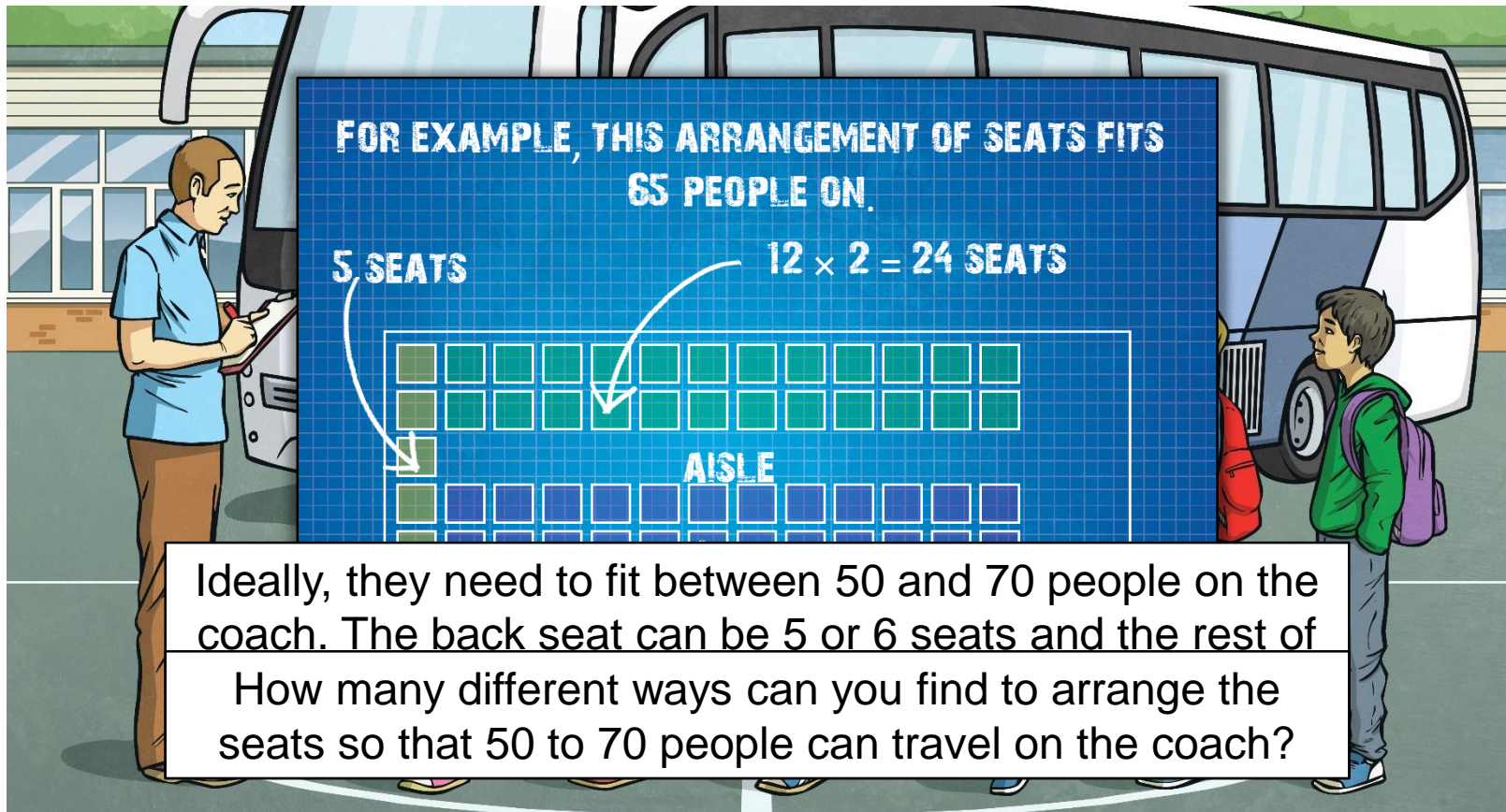
# Lesson Aims

- I can divide 3 digit numbers by a 1 digit number

# St Paul's Travel Company



*St Paul's Travel need to design their coaches so that they can take as many children as possible out on school visits.*



# What Is Short Division?

*Short division is a formal written method for division.*

**QUOTIENT**

**REMAINDER**

**1 2 R1**

**4 | 4 9**

**DIVISOR** **DIVIDEND**

When calculating using short division, we start at the left and work towards the right.

When it is set out, it looks like a bus stop, so you might have heard it called the bus stop method.

This is different from the written methods for addition, subtraction and multiplication, where we work from right to left.



# Bookings



*Let's work through an example together:*

Start at the left and share 6 hundreds into 3 groups. This makes 2 hundreds in each group. Write the 2 above the line.

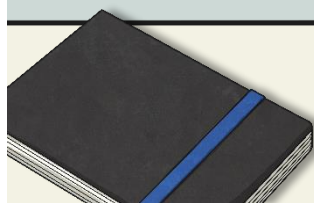
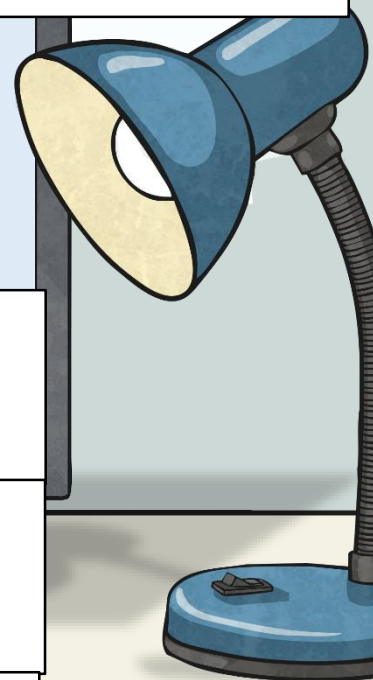
The answer is 231.

$$\begin{array}{r} 2 \quad 3 \quad 1 \\ 3 \overline{) 693} \end{array}$$

A simpler way you could think of this is:  
 $6 \text{ (hundreds)} \div 3 = 2 \text{ (hundreds)}$ ,  
so write 2 above the line.

Next, divide 9 (tens) by 3.  
 $9 \text{ (tens)} \div 3 = 3 \text{ (tens)}$ ,  
so write 3 above the line.

Finally, divide 3 by 3.  
 $3 \div 3 = 1$ , so write 1 above the line.







# Regroup

*Let's work through an example of the short written method where we need to regroup:*

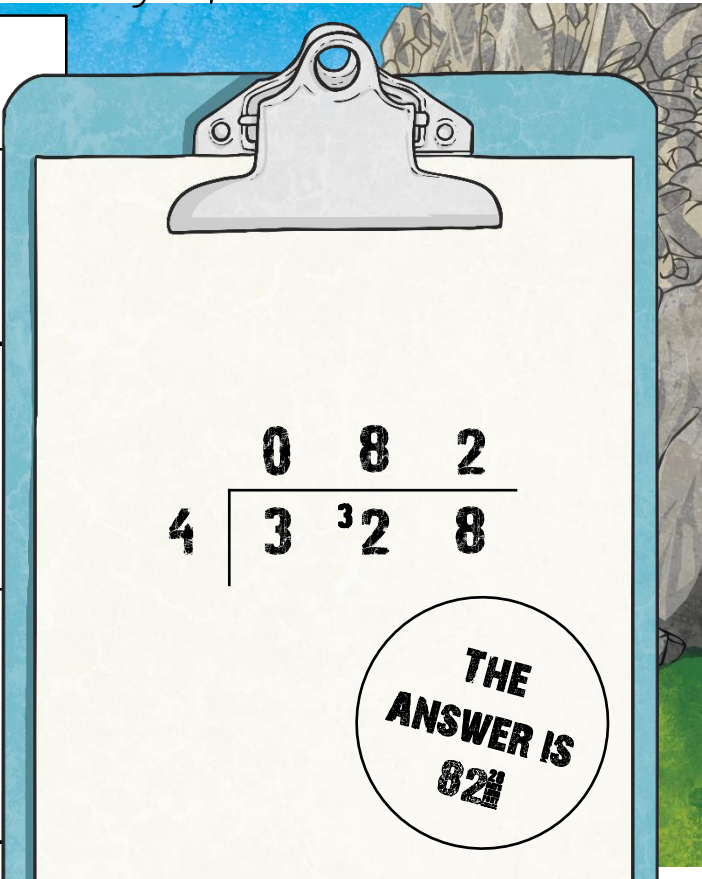
First, look at the hundreds column.  
Share these 3 hundreds into 4 groups.

Now, we have 32 tens to share into 4 groups.  $32 \text{ (tens)} \div 4 = 8 \text{ (tens)}$ , so write 8 above the line.

This can't be done without breaking up the hundreds, so we write 0 above the line and regroup, moving the 30 tens across into the tens column.

A simpler way you could think of this is:  $3 \text{ (hundreds)} \div 4$  can't be done, so move the 3 (hundreds) into the tens column.

Finally, share 8 into 4 groups.  
 $8 \div 4 = 2$ , so write 2 above the line.


$$\begin{array}{r} 0 \quad 8 \quad 2 \\ 4 \overline{) 328} \end{array}$$

**THE  
ANSWER IS  
82**

# Remainders

*What happens if the last digit won't divide exactly by the divisor?*


$$\begin{array}{r} 7701 \text{ R}2 \\ 4 \overline{) 30816} \end{array}$$

THE  
ANSWER IS  
7701 R2

First, look at the hundreds column.

Share these 3 hundreds into 4 groups.

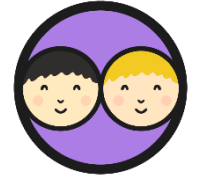
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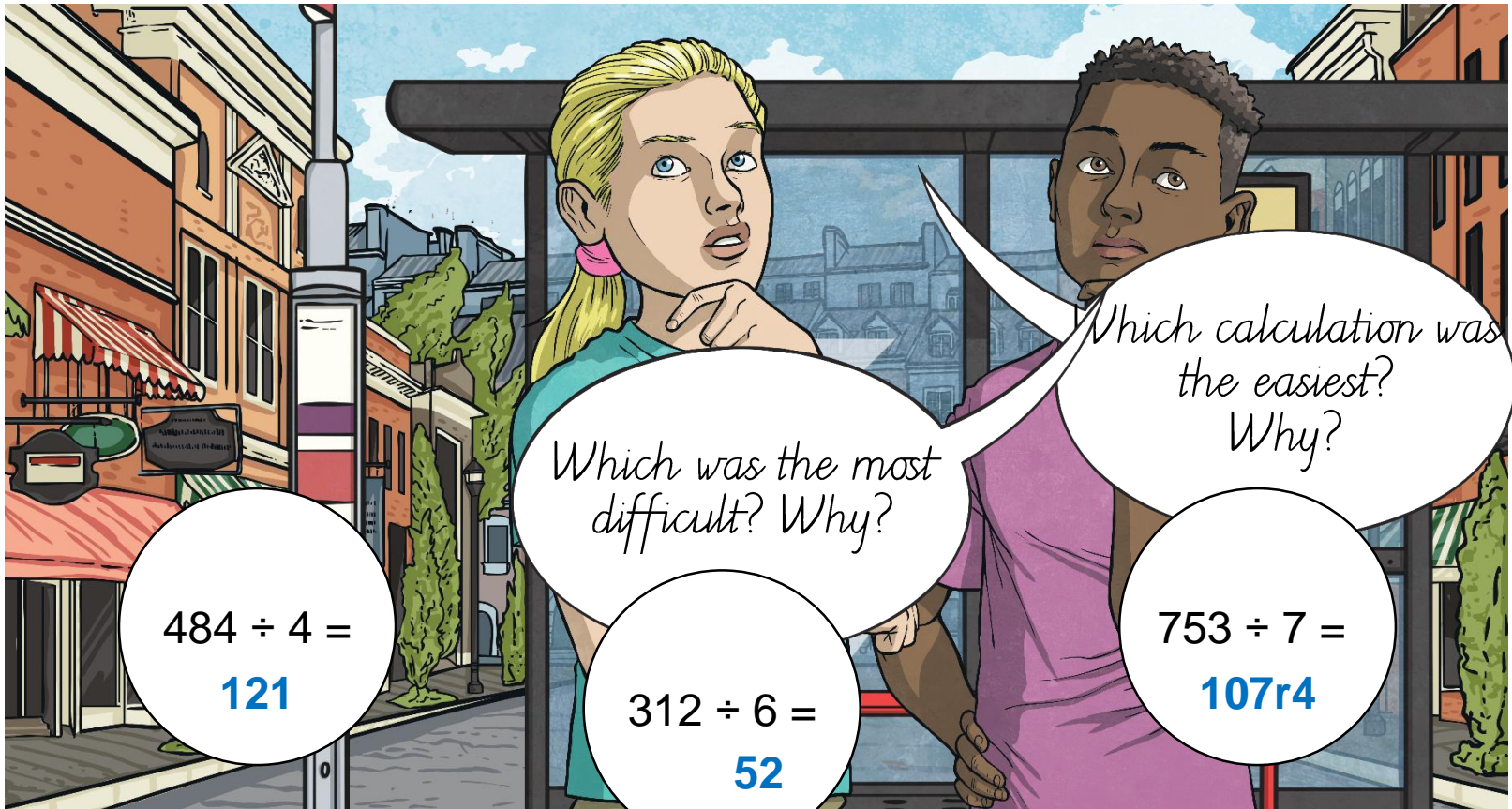
A simpler way you could think of this is:  $3 \text{ (hundreds)} \div 4$  can't be done, so move the 3 (hundreds) into the tens column.

Finally, share 6 into 4 groups. This makes 1 group of 4 but leaves 2 left over. Write r (remainder). 1r2.

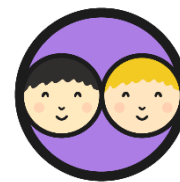
# Checkup



*Work in pairs to complete these.*



# Left-Luggage Division



Use your marvellous maths skills to complete these activities.  
Choose 1, 2 or 3 stars.



## Left-Luggage Division

I can use short division to divide three-digit numbers by one-digit numbers.

Use the written method of short division to calculate the luggage numbers and match the luggage to the correct bus.

Draw a line from the suitcase to the correct bus when you have worked out the answer.

$$\begin{array}{r} 23 \text{ r}2 \\ 3 \overline{) 695} \end{array}$$

$$\begin{array}{r} 9778 \\ 9 \overline{) 778} \end{array}$$

$$\begin{array}{r} 4926 \\ 4 \overline{) 926} \end{array}$$

$$\begin{array}{r} 5802 \\ 5 \overline{) 802} \end{array}$$

$$\begin{array}{r} 6784 \\ 6 \overline{) 784} \end{array}$$

$$\begin{array}{r} 3998 \\ 3 \overline{) 998} \end{array}$$

$$\begin{array}{r} 5494 \\ 5 \overline{) 494} \end{array}$$

$$\begin{array}{r} 9898 \\ 9 \overline{) 898} \end{array}$$

$$\begin{array}{r} 8367 \\ 8 \overline{) 367} \end{array}$$



Maths Year 5: Multiplication and Division | Written Methods for Division | Lesson 1 of 6 | Left-Luggage Division



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$$\begin{array}{r} 23 \text{ r}2 \\ 3 \overline{) 695} \end{array}$$

$$\begin{array}{r} 9781 \\ 9 \overline{) 781} \end{array}$$

$$\begin{array}{r} 3969 \\ 3 \overline{) 969} \end{array}$$

$$\begin{array}{r} 5893 \\ 5 \overline{) 893} \end{array}$$

$$\begin{array}{r} 2784 \\ 2 \overline{) 784} \end{array}$$

$$\begin{array}{r} 3997 \\ 3 \overline{) 997} \end{array}$$

$$\begin{array}{r} 5490 \\ 5 \overline{) 490} \end{array}$$

$$\begin{array}{r} 8572 \\ 8 \overline{) 572} \end{array}$$

$$\begin{array}{r} 6298 \\ 6 \overline{) 298} \end{array}$$



Maths Year 5: Multiplication and Division | Written Methods for Division | Lesson 1 of 6 | Left-Luggage Division



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$$\begin{array}{r} 231 \\ 3 \overline{) 693} \end{array}$$

$$\begin{array}{r} 9981 \\ 9 \overline{) 981} \end{array}$$

$$\begin{array}{r} 2284 \\ 2 \overline{) 284} \end{array}$$

$$\begin{array}{r} 3942 \\ 3 \overline{) 942} \end{array}$$

$$\begin{array}{r} 3936 \\ 3 \overline{) 936} \end{array}$$

$$\begin{array}{r} 5960 \\ 5 \overline{) 60} \end{array}$$

$$\begin{array}{r} 4524 \\ 4 \overline{) 524} \end{array}$$

$$\begin{array}{r} 8360 \\ 8 \overline{) 360} \end{array}$$

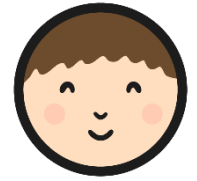
$$\begin{array}{r} 6288 \\ 6 \overline{) 288} \end{array}$$



Maths Year 5: Multiplication and Division | Written Methods for Division | Lesson 1 of 6 | Left-Luggage Division



# Inverse Check



*Multiplication and division are inverse operations.*

**USE SHORT  
MULTIPLICATION TO  
CHECK FIVE OF THE  
ANSWERS FROM THE  
LEFT-LUGGAGE DIVISION  
ACTIVITY SHEET.**

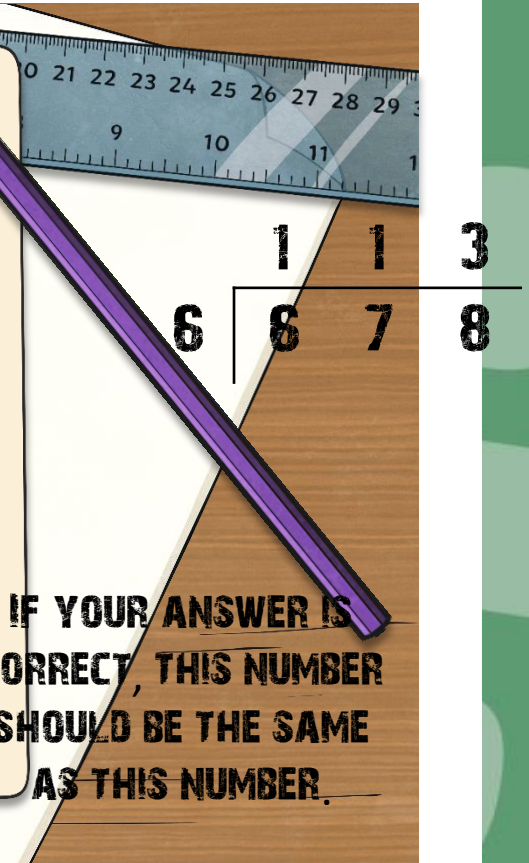
**IF YOU MADE ANY  
MISTAKES, DO THE  
CALCULATION AGAIN  
CORRECTLY.**

**IF YOUR CALCULATION HAD  
A REMAINDER, THIS NUMBER  
SHOULD BE THE SAME AS  
THIS NUMBER PLUS THE  
REMAINDER, E.G.**

$$675 \div 6 = 112R3$$
$$112 \times 6 = 672 + 3 = 675$$

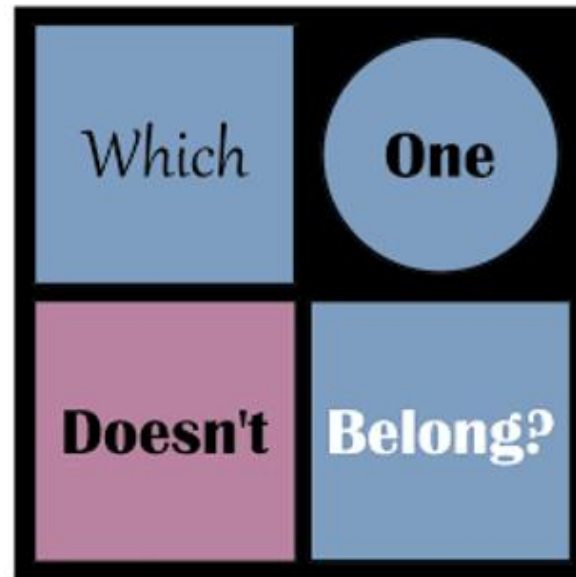
1	1	3
		6
<hr/>		
6	7	8
		1

**IF YOUR ANSWER IS  
CORRECT, THIS NUMBER  
SHOULD BE THE SAME  
AS THIS NUMBER.**





# Problem Solving







# Problem Solving

- How many ways can you find?

$$5 + 5$$

$$2 + 8$$

$$9 + 1$$

$$3 + 9$$



# Problem Solving

- How many different ways did you find?
- Can you explain your reasoning?