Diving into Mastery

Divide with Remainders

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

Diving

Deeper

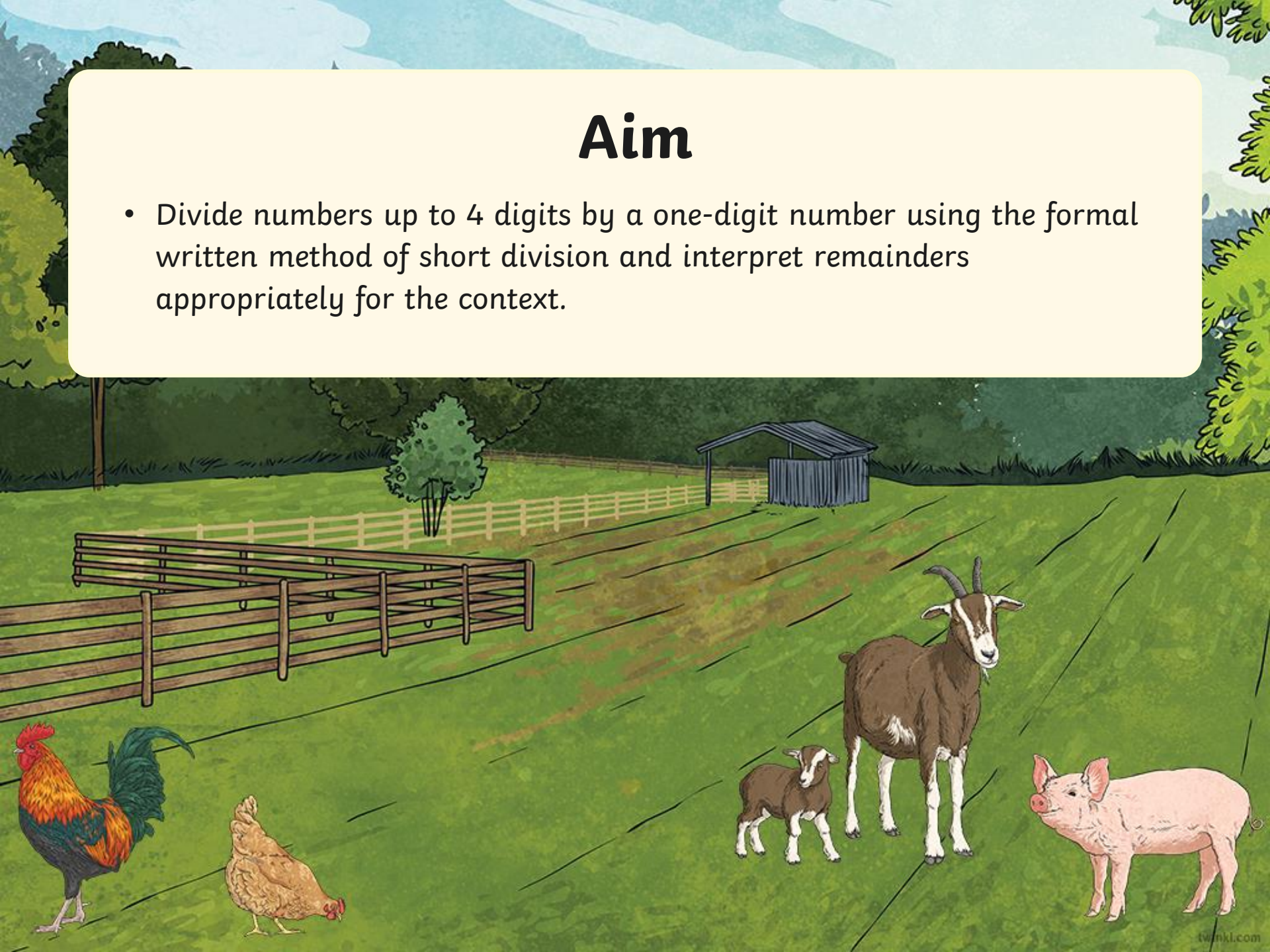
Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Aim

- Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.



Divide with Remainders

Diving

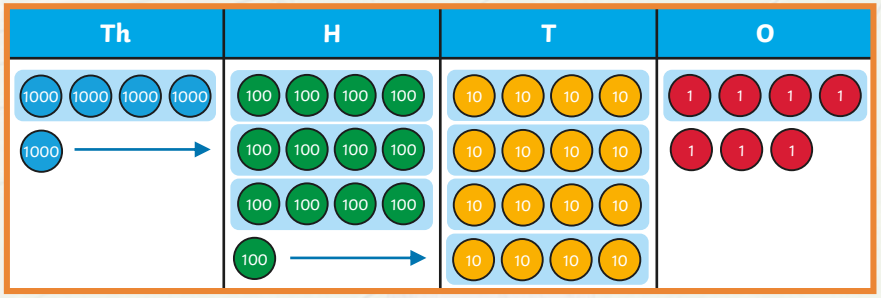
Match each division question with its place value representation and short division calculation. Then, work out the missing digits in the calculation.

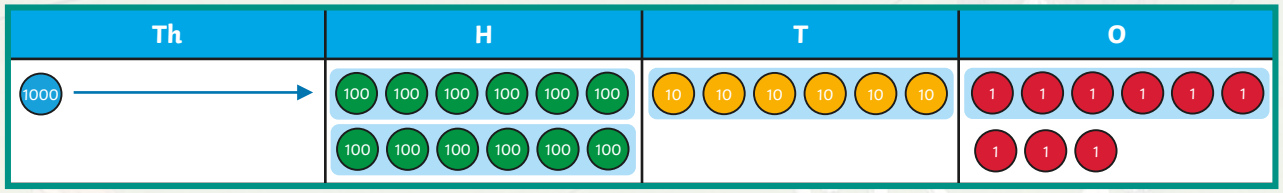
5367 ÷ 4 = 1341r3

1269 ÷ 6 = 211r3

	1	3	4	1	r3
4	5	$^{1}3$	$^{1}6$	7	

	0	2	1	1	r3
6	1	$^{1}2$	6	9	





Divide with Remainders | **Diving**

A chocolate factory has made 3208 chocolate eggs. They pack them in trays of 6.

How many trays are needed?

3208 ÷ 6 = 534r4 so 535 trays are needed.

How many full trays will the factory produce?

534 trays

How many more eggs will be needed to fill the final tray?

2 more eggs

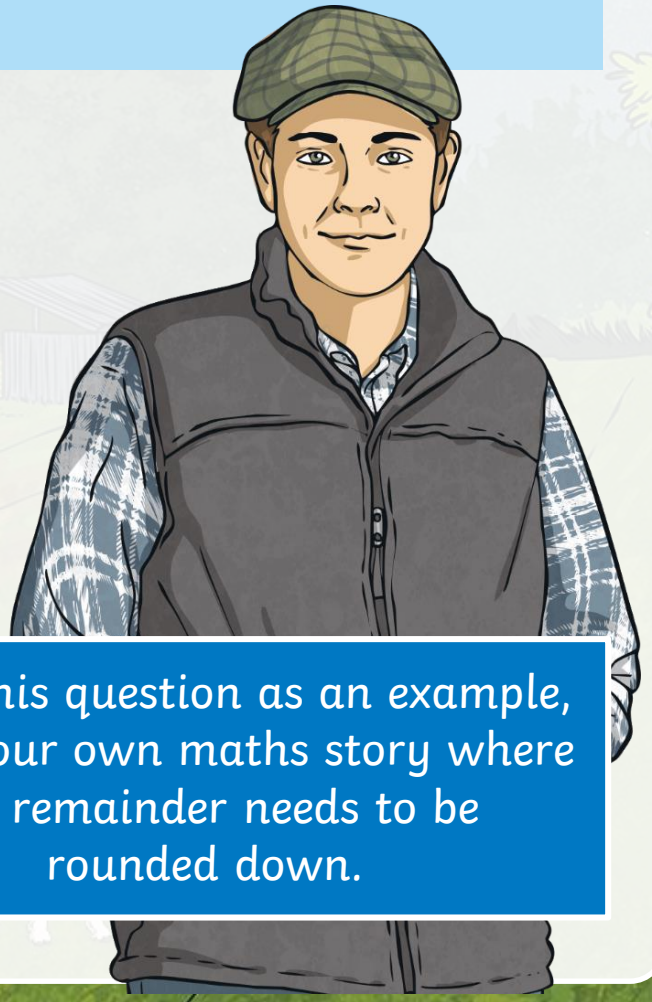
Divide with Remainders **Deeper**

Twinkl Farm has **1523** potato plants. The potatoes are planted in rows of **6**.

Freddie the farmer says he needs 253r5 rows for the potatoes.

Do you agree? Explain your thinking.

Freddie is incorrect. He has completed the calculation correctly but he has incorrectly interpreted the remainder. You cannot have r5 of a row. He will need 254 rows but the final row will not be full - it will only contain 5 potato plants.



Using this question as an example, write your own maths story where the remainder needs to be rounded down.

Divide with Remainders | **Deepest**

Choose a divisor and a dividend from the lists below. Predict whether your answer will have a remainder or not.

Divisor	Dividend
3	1435
4	2748
5	3750
6	4206
	7825
	2324

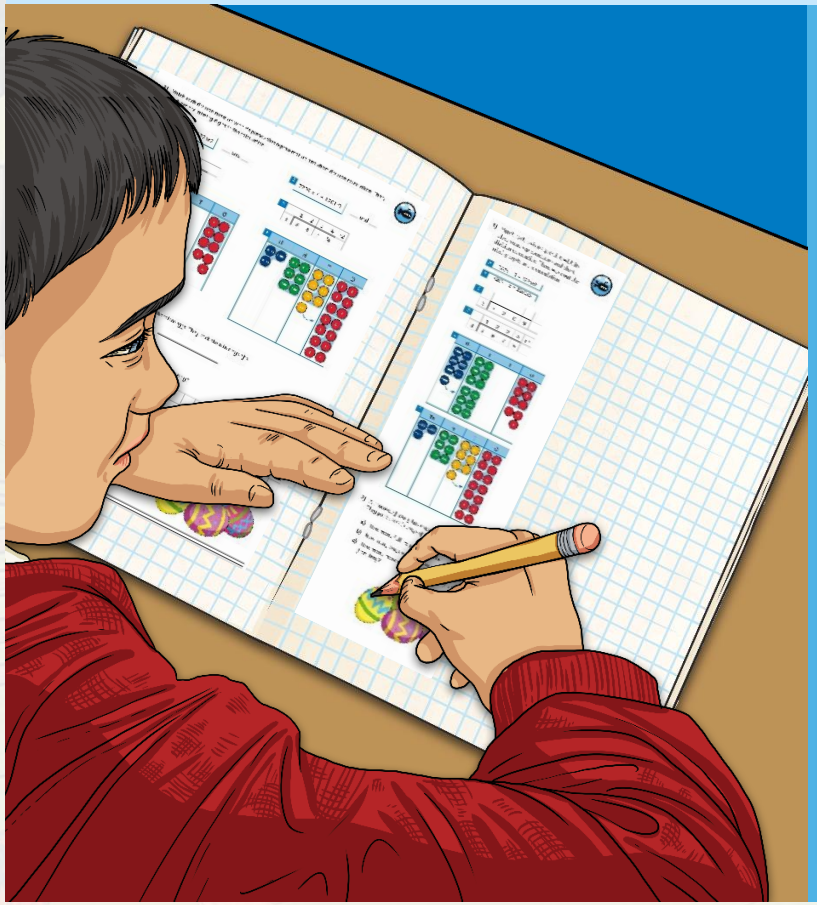
Can you explain your reasons? Carry out a short division to check each prediction.

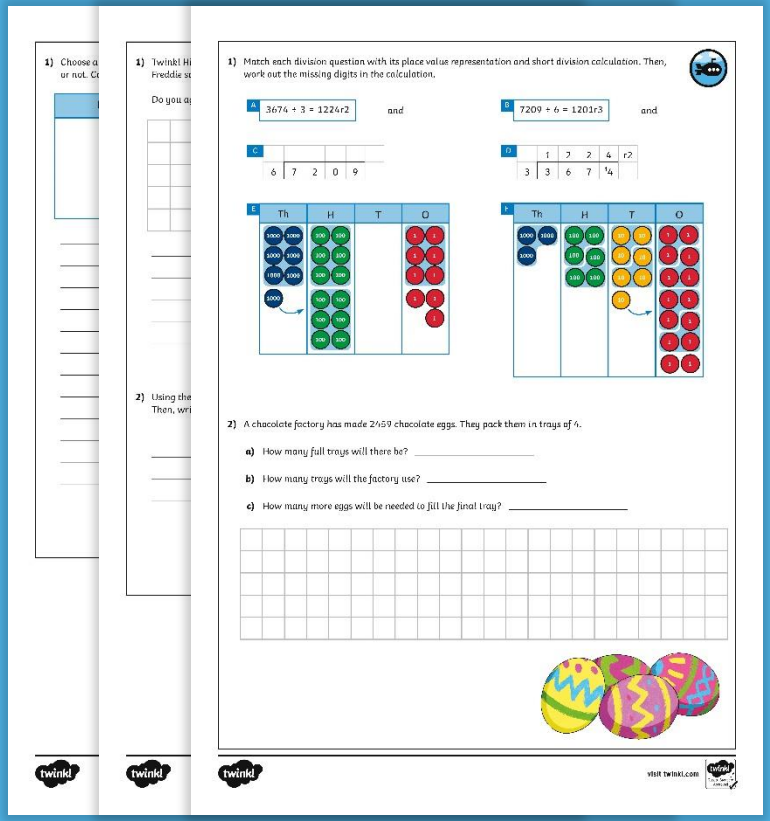
How do you know that 1435 divided by 5 will have no remainder? Explain your thinking.

1435 ends with 5 so it is a multiple of 5. Therefore, it will not have a remainder.

Divide with Remainders

Dive in by completing your own activity!





1) Match each division question with its place value representation and short division calculation. Then, work out the missing digits in the calculation.

A 3674 ÷ 3 = 1224r2 and

B 7209 ÷ 6 = 1201r3 and

C

6	7	2	0	9	

D

	1	2	2	4	r2
3	3	6	7	4	

E

Th	H	T	O

F

Th	H	T	O

2) A chocolate factory has made 2459 chocolate eggs. They pack them in trays of 6.

a) How many full trays will there be? _____

b) How many trays will the factory use? _____

c) How many more eggs will be needed to fill the final tray? _____

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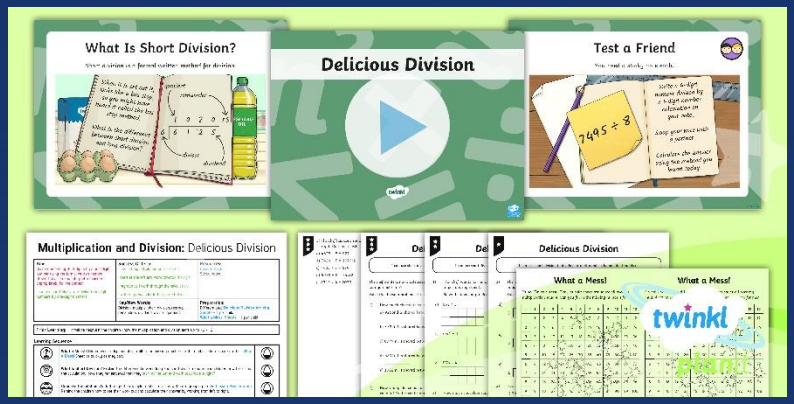
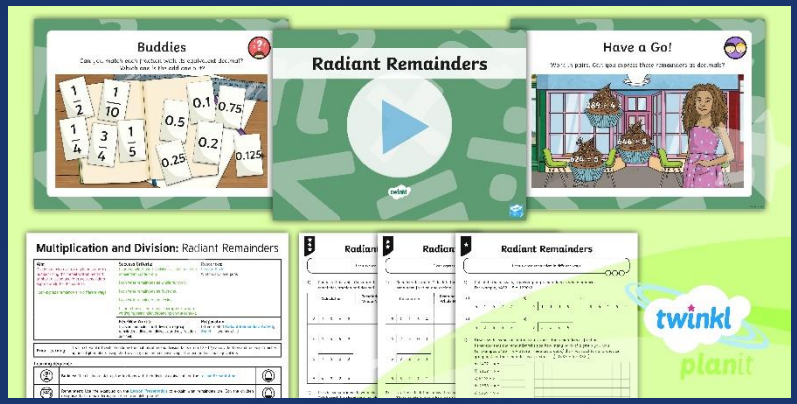
Need Planning to Complement this Resource?

National Curriculum Aim

Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.

For more planning resources to support this aim, click here.





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