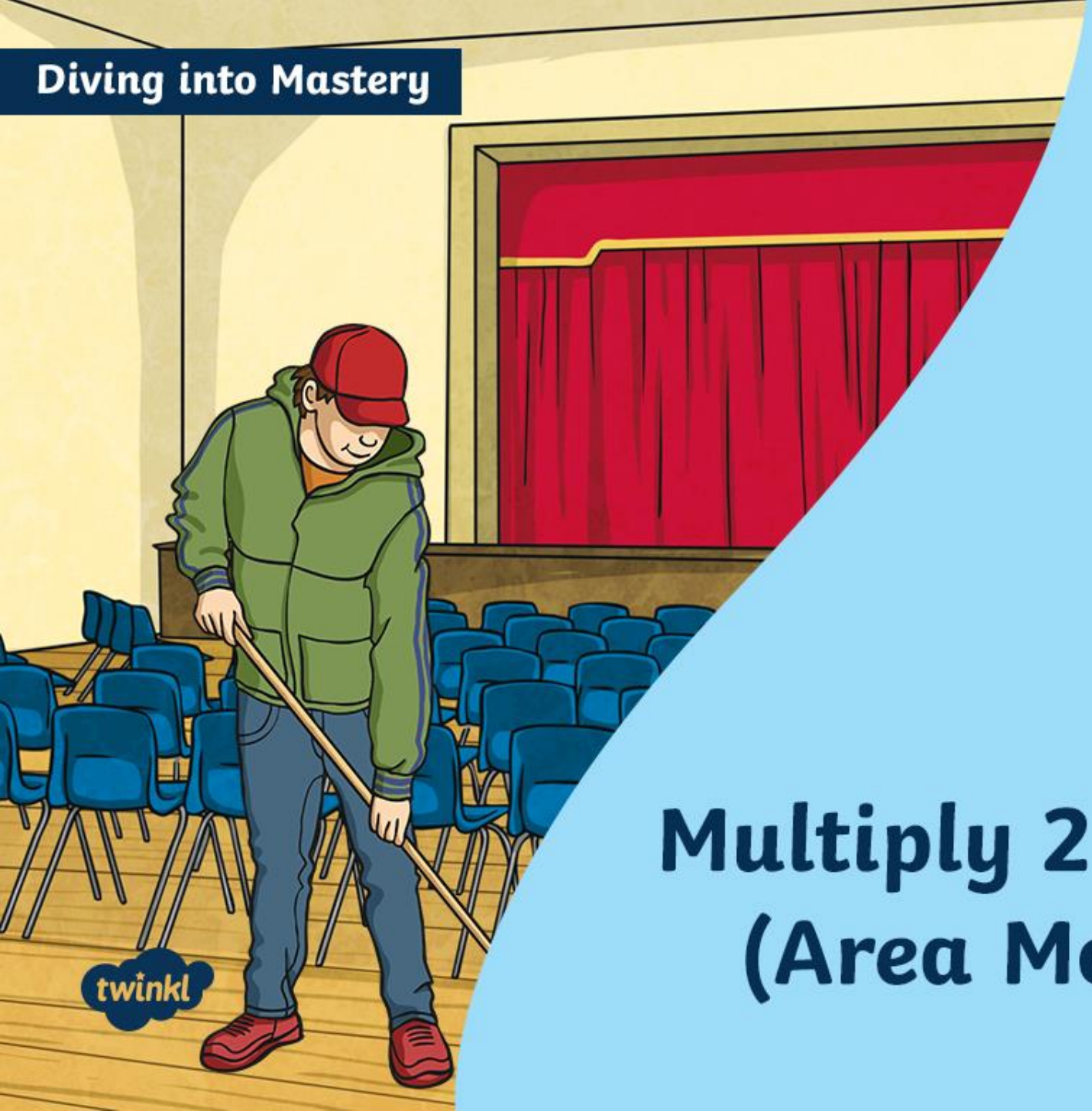
Diving into Mastery





Multiply 2 Digits (Area Model)

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Quality Standard Approved

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.

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Aim

- Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.

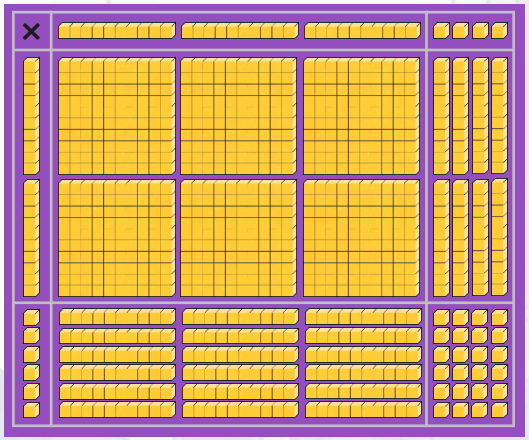


Multiply 2 Digits (Area Model)

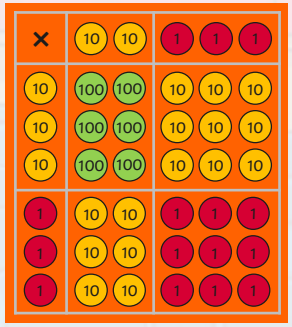
Diving

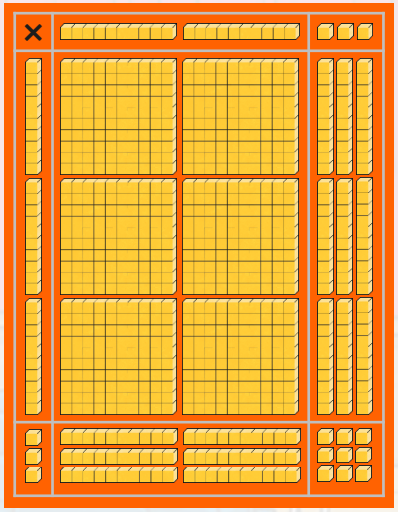
Find the three different representations that match each of these calculations:

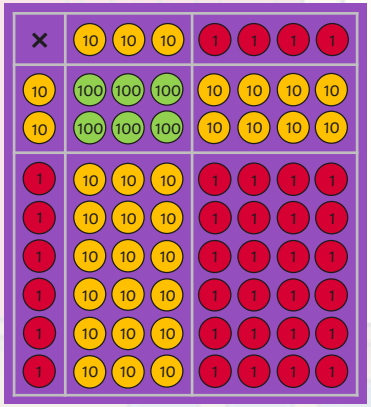
26 × 17 **34 × 26** **23 × 33**

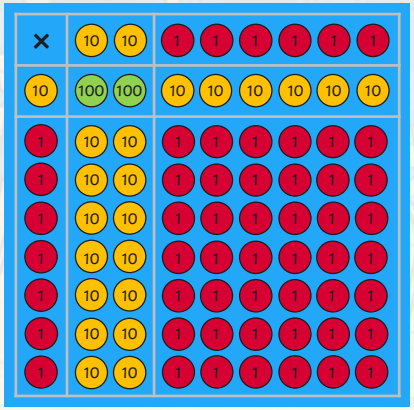


×	20	6
10	200	60
7	140	42



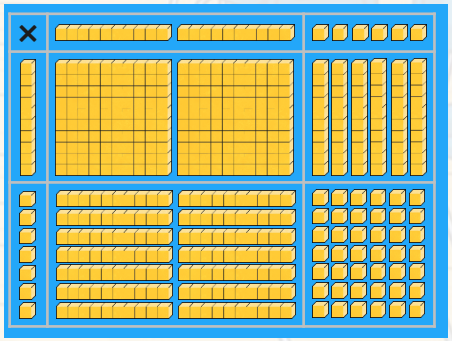






×	20	3
30	600	90
3	60	9

×	30	4
20	600	80
6	180	24

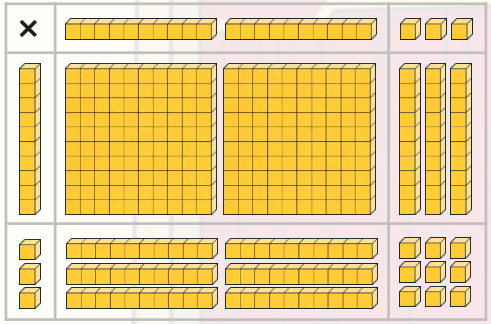


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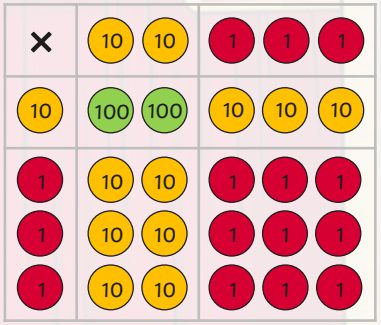
Multiply 2 Digits (Area Model)

Diving

Use base ten to represent 23 × 13.



Next, use place value counters to show this multiplication calculation.





Finally, show this correctly using a grid.

×	20	3
10	200	30
3	60	9

	2	0	0
		3	0
		6	0
+			9
	2	9	9

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Multiply 2 Digits (Area Model)

Deeper

Paul and Prue are calculating 16 × 28.

Who has completed the grid correctly?

What mistakes have been made?

×	10	6
20	200	120
8	80	48

This method is correct.

×	20	8
10	2000	80
6	120	48

Prue has incorrectly recorded 20 × 10 as 2000 whereas it is in fact 200.

		2	0	0
		1	2	0
			8	0
+			4	8
		4	4	8

1

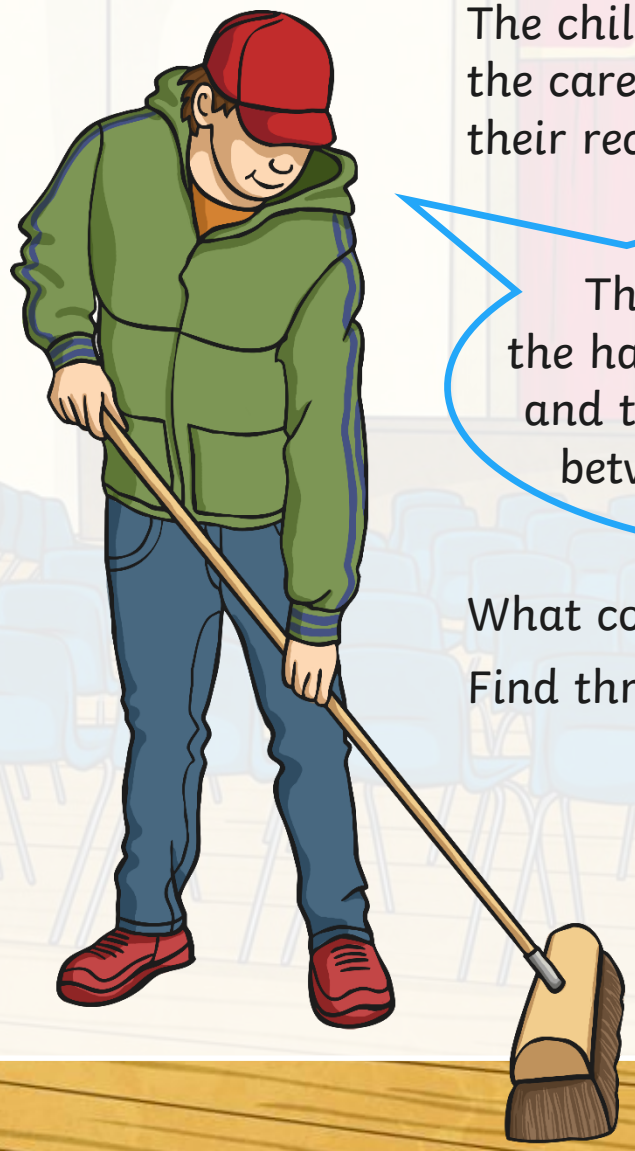
	2	0	0	0
		1	2	0
			8	0
+			4	8
	2	2	4	8

1



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Multiply 2 Digits (Area Model) | Deepest



The children at Twinkl Academy are trying to solve the caretaker's clues to find the measurements of their rectangular school hall floor.

The length of each side of the hall floor is a 2-digit number and the area of the hall floor is between 500m^2 and 550m^2.

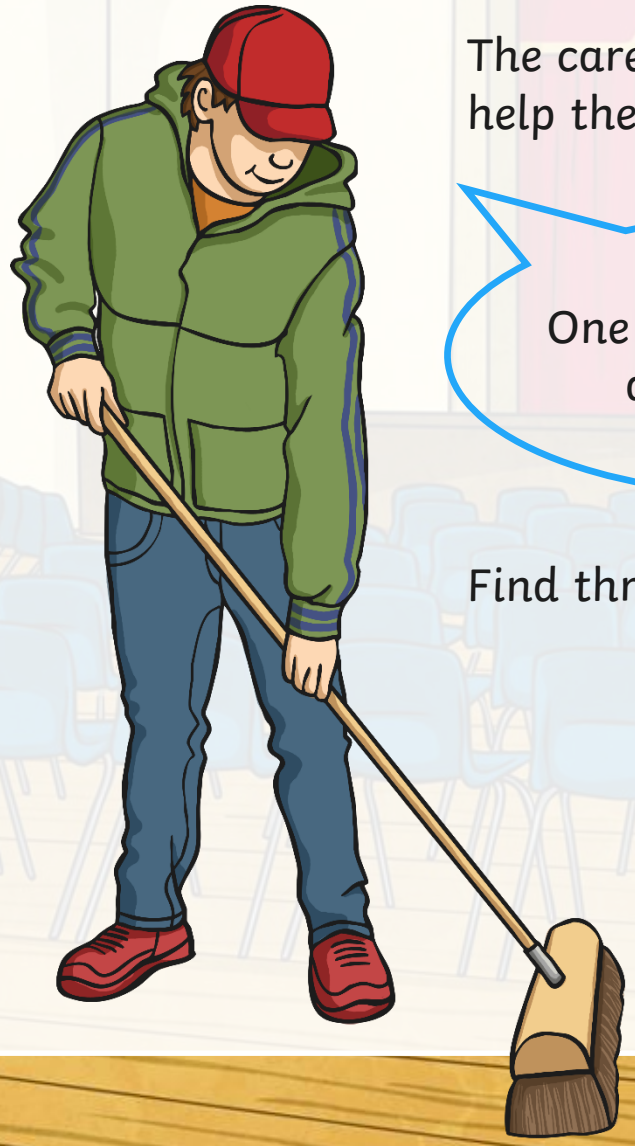
What could the measurements be?

Find three possible solutions.

Possible solutions include 26m × 21m, 19m × 28m and 32m × 16m.

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Multiply 2 Digits (Area Model) | Deepest



The caretaker adds an extra clue to help the children.

One of the sides has a digit sum of 6.

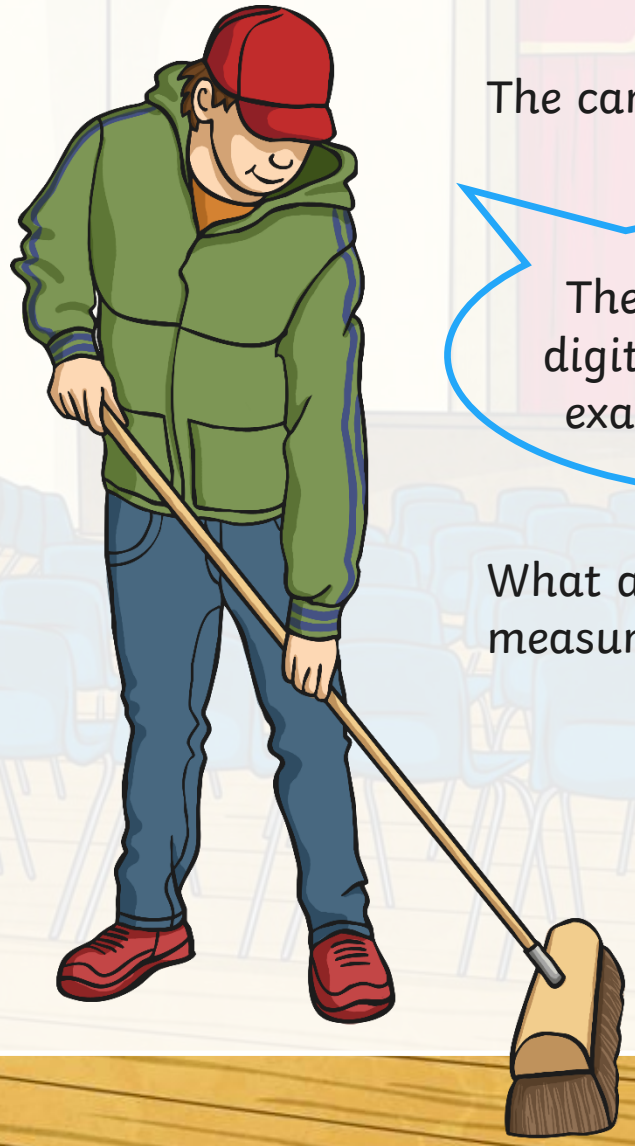
Find three possible solutions.

Possible solutions include 33m × 16m, 15m × 36m and 24m × 22m.

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Multiply 2 Digits (Area Model)

Deepest



The caretaker gives a final clue.

The other side has a digit sum of 4 and the exact area is 528m^2.

What are the exact measurements of the hall?

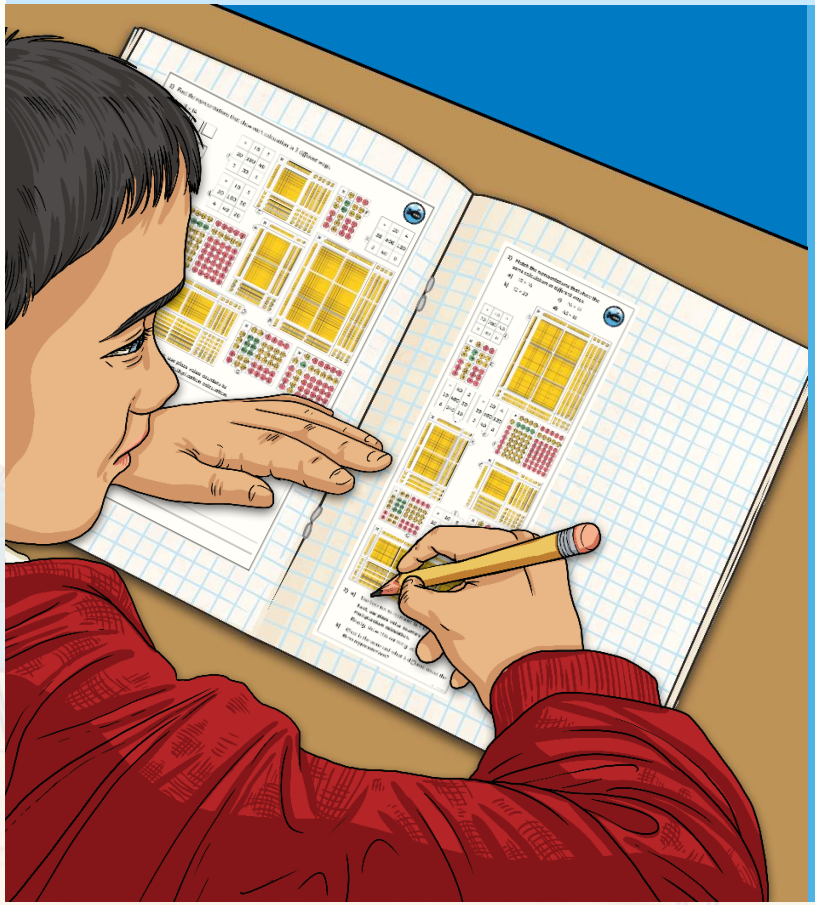
The sides of the hall floor measure 24m and 22m.

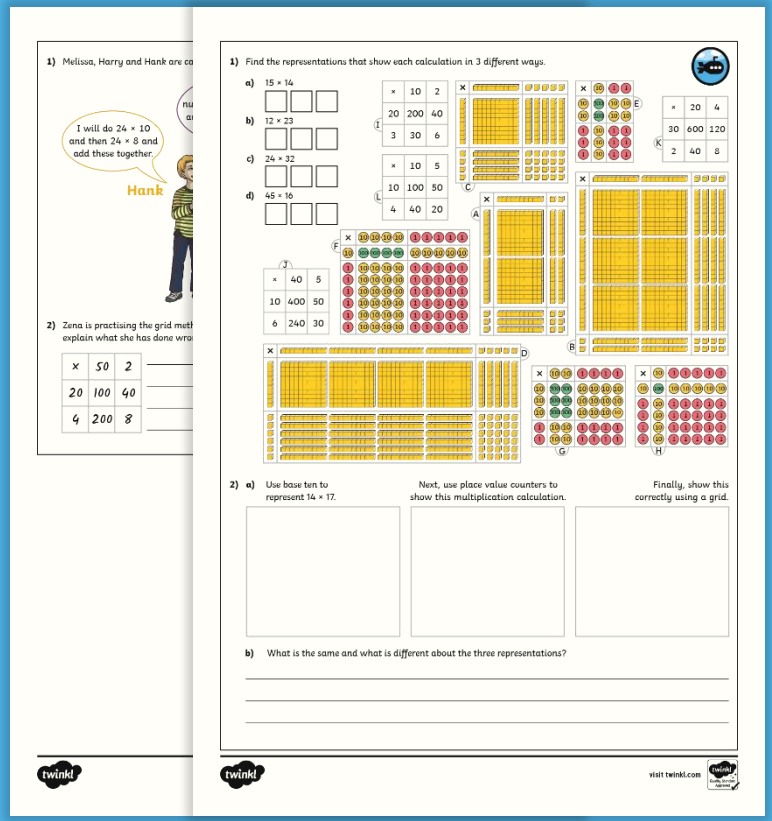
24m × 22m = 528m^2

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Multiply 2 Digits (Area Model)

Dive in by completing your own activity!





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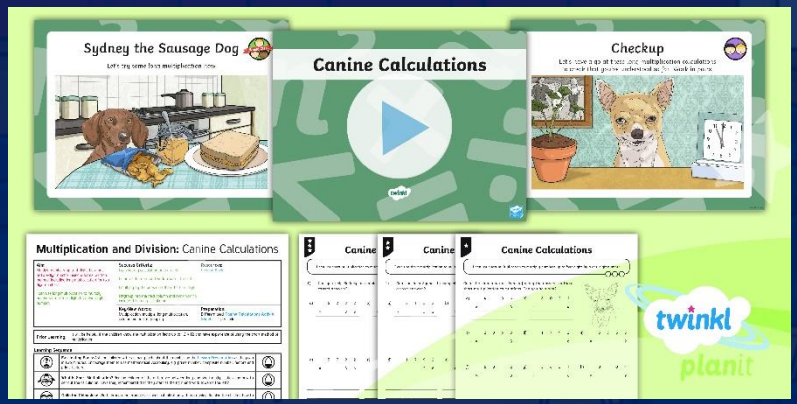
Need Planning to Complement this Resource?

National Curriculum Aim

Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.

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





Twinkl PlanIt is our award-winning scheme of work with over 4000 resources.

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