



Maths

Multiplication and Division

Short Multiplication with Three-Digit Numbers



Aim

- I can use the short method of multiplication to multiply three-digit numbers by one-digit numbers.

Success Criteria

- I can set my calculation out correctly.
- I can start at the right-hand side when calculating.
- I can regroup tens, hundreds and thousands, recording this in the next column.
- I can use a calculator to check my own work and fix my mistakes.

Change Direction



Stand in a circle.

I will choose a multiplication table.

You must say the multiplication table out loud, moving round the circle.

When you hear the sound, you must start saying the table backwards.

If you hear the sound again, start counting forwards again!



Short Multiplication

H	T	O
	4	9
×		7
<hr/>		
3	4	63
<hr/>		

First set your calculation out correctly with one number in each square. Use a ruler to draw your lines.

We need to regroup the 60 ones into 6 tens. These go into the tens column. Write 6 under the line.

Now calculate the tens digit. Multiply 4 by 7. $4 \text{ tens} \times 7 = 28 \text{ tens} = 280$. We need to add on the 6 tens that we wrote under the line.
 $28 \text{ tens} + 6 \text{ tens} = 34 \text{ tens}$.


Write the 4 in the tens column, and the 3 in the hundreds column.

Missing Numbers



Can you work out the missing digits in these calculations?

Click on a paint splat to reveal the answers.

	3	6
×		4
1		4
	2	

	8	
×		7
6		9
	4	

Multiply Three-Digit Numbers by One-Digit Numbers



First set your calculation out correctly, with one number in each square. Use a ruler to draw your lines.

Multiply the ones.

Now calculate the tens.

Now calculate the hundreds.

	H	T	O
	2	3	1
×			2
	4	6	2

Multiply Three-Digit Numbers by One-Digit Numbers



First set your calculation out correctly, with one number in each square. Use a ruler to draw your lines.

Multiply the ones.

Now calculate the tens.

Now calculate the hundreds.

	H	T	O
	2	0	1
×			4
	8	0	4

Regrouping into the Thousands



First set your calculation out correctly, with one number in each square. Use a ruler to draw your lines.

Multiply the ones.

Now calculate the tens.

Now calculate the hundreds.

Each time, remember to add on the digits you wrote underneath the line when you regrouped.

	H	T	O
	4	6	8
×			7
	3	2	7
	4	5	

Regrouping into the Thousands



First set your calculation out correctly, with one number in each square. Use a ruler to draw your lines.

Multiply the ones.

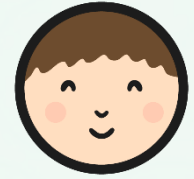
Now calculate the tens.

Now calculate the hundreds.

Each time, remember to add on the digits you wrote underneath the line when you regrouped.

	H	T	O
	5	9	3
×			6
	3	5	8
	5	1	

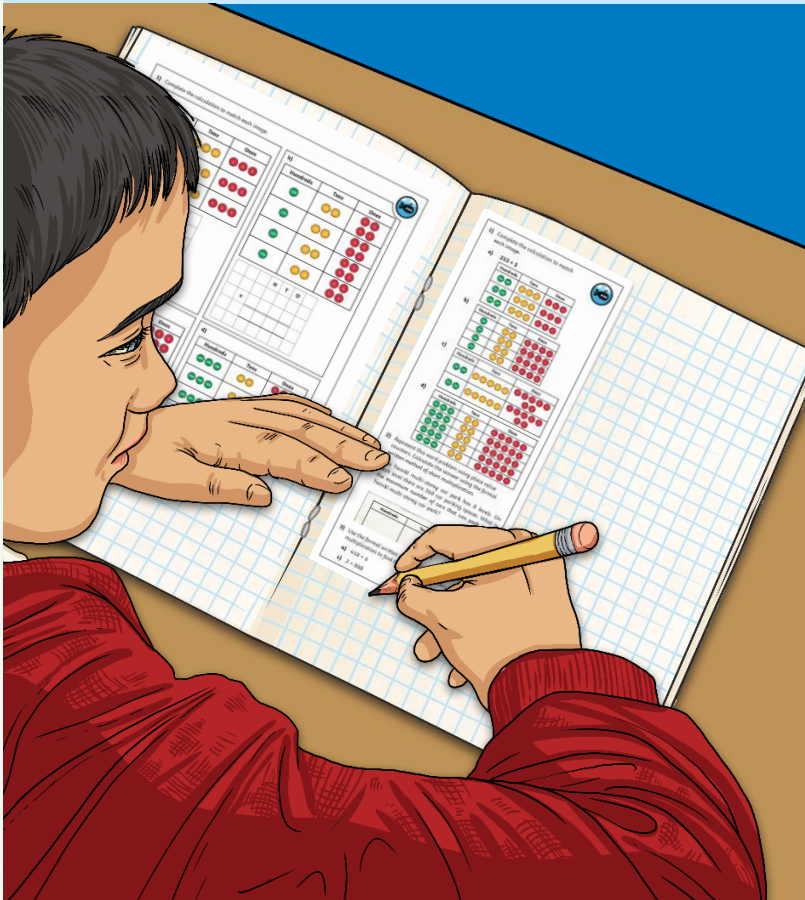
Short Multiplication Activities



★ Short Multiplication	★ Short Multiplication	★★ Short Multiplication	★★ Short Multiplication	★★★ Short Multiplication	★★★ Short Multiplication
<p>I can use the short method</p> <p>1. Choose a card from the first set your calculations out on a grid</p> <div><p>230</p><p>102</p></div> <p>2. Answer these questions:</p> <p>What was the largest answer?</p> <p>What was the smallest answer?</p>	<p>Grid for calculations</p>	<p>I can use the short method</p> <p>1. Choose a card from the first set your calculations out on a grid</p> <div><p>373</p><p>503</p></div> <p>2. Now check your calculations where you went wrong, draw a line through the wrong answer.</p> <p>What was the largest answer?</p> <p>What was the smallest answer?</p>	<p>Grid for calculations</p>	<p>I can use the short method</p> <p>1. Choose a card from the first set your calculations out on a grid</p> <div><p>497</p><p>549</p></div> <p>2. Now check your calculations where you went wrong, draw a line through the wrong answer.</p> <p>What was the largest answer?</p> <p>What was the smallest answer?</p> <p>How many different calculations did you get?</p>	<p>Grid for calculations</p>

Diving into Mastery

Dive in by completing your own activity!



1) Complete the calculation to match each image.

a) 233×3

Hundreds	Tens	Ones
2	3	3
2	3	3
2	3	3

b)

Hundreds	Tens	Ones
2	3	3
2	3	3
2	3	3

c)

Hundreds	Tens	Ones
2	3	3
2	3	3
2	3	3

d)

Hundreds	Tens	Ones
2	3	3
2	3	3
2	3	3

2) Represent this word problem using place value counters. Calculate the answer using the formal written method of short multiplication.

The Twinkl multi-storey car park has 8 levels. On each level there are 368 car parking spaces. What is the maximum number of cars that can park in the Twinkl multi-storey car park?

Hundreds	Tens	Ones

3) Use the formal written method of short multiplication to find the answer to each calculation.

a) 458×6 b) 981×3
 c) 2×808 d) 5×670

1) Complete the calculation to match each image.

a) 233×3

Hundreds	Tens	Ones
2	3	3
2	3	3
2	3	3

b)

Hundreds	Tens	Ones
2	3	3
2	3	3
2	3	3

c)

Hundreds	Tens	Ones
2	3	3
2	3	3
2	3	3

d)

Hundreds	Tens	Ones
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Hundreds	Tens	Ones

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a) 458×6 b) 981×3
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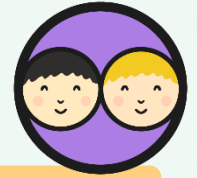
Tens Ones

3	3
3	3
3	3
3	3
3	3
3	3
3	3
3	3





T O

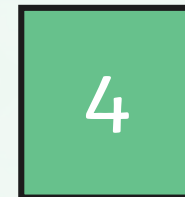
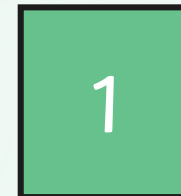
T O

Work Backwards



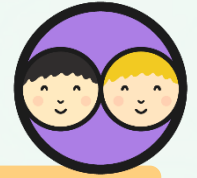
Can you replace the paint splat in this calculation with a digit from the cards to make the calculation correct? Click a digit card to see if you were correct.

			
×			
	8	4	0







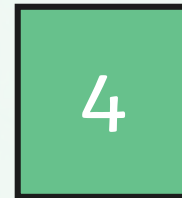
How did you solve this problem?

Work Backwards



Can you replace the paint splat in this calculation with a digit from the cards to make the calculation correct? Click a digit card to see if you were correct.

	4		
×			8
3	8	0	0
			



How did you solve this problem?

Aim



- I can use the short method of multiplication to multiply three-digit numbers by one-digit numbers.

Success Criteria

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