



1) a) $2238 \times 43 = 96\,234$ $5604 \times 73 = 409\,092$ $8516 \times 35 = 298\,060$

2) a) The woodlands have a greater area.

b) Area of park = $385\,092\text{m}^2$

Area of woodlands = $391\,664\text{m}^2$

		3	6	5	4
	x			9	8
<hr/>					
	2	9 ₅	2 ₄	3 ₃	2
3	2 ₅	8 ₄	8 ₃	6	0
<hr/>					
3	5	8	0	9	2

| |

		7	5	3	2
	x			5	2
<hr/>					
	1	5 ₁	0	6	4
3	7 ₂	6 ₁	6 ₁	0	0
<hr/>					
3	9	1	6	6	4

|

1)

a) $4520 \times 35 = 36\,160$	The correct answer is $158\,200$. Helena has not put the zero placeholder in when calculating 4520×30 . $20 \times 30 = 600$ and not 60.		X
b) $7648 \times 27 = 206\,496$			✓
c) $2112 \times 18 = 38\,006$	The correct answer is $38\,016$. Helena has not recorded the regrouped ten from $2 \times 8 = 16$.		X



2)

a) 6587×72	$6587 \times 72 = 474\,264$ $500\,000 - 474\,264 = 25\,736$
b) 7206×68	$7206 \times 68 = 490\,008$ $500\,000 - 490\,008 = 9992$
c) 5982×84	$5982 \times 84 = 502\,488$ $502\,488 - 500\,000 = 2488$ This is the closest answer to $500\,000$.

1)

	2	4	2	7
x			3	2
<hr/>				
	4	8	5	4
7	2	8	1	0
<hr/>				
7	7	6	6	4

		4	6	5	3
	x			4	6
<hr/>					
	2	7	9	1	8
1	8	6	1	2	0
<hr/>					
2	1	4	0	3	8

2)

		3	2	5	4
	x			3	6
<hr/>					
	1	9	5	2	4
	9	7	6	2	0
<hr/>					
1	1	7	1	4	4





1) a) Use long multiplication to complete these calculations.

$2238 \times 43 =$ _____

x					
<hr/>					
<hr/>					

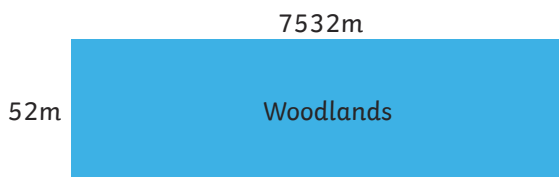
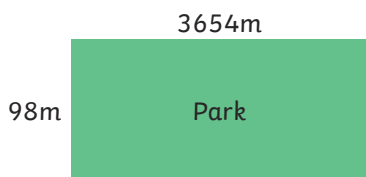
$5604 \times 73 =$ _____

x					
<hr/>					
<hr/>					

$8516 \times 35 =$ _____

x					
<hr/>					
<hr/>					

2) Here are plans of the park and the woodlands in Twinkl Town.



a) Which do you predict will have a greater area – the park or the woodlands? _____

b) Use long multiplication to calculate both areas to find out if you were correct.

Area of park = _____m²

Area of woodlands = _____m²



1) Helena has answered some calculations using long multiplication but she has not recorded her working out.

Tick the correct answers and cross the incorrect ones.

For each incorrect answer, explain the mistake she has made. To help with this, you may want to use some squared paper to work out each calculation yourself.

a) $4520 \times 35 = 36\ 160$	<hr/> <hr/> <input type="checkbox"/>
b) $7648 \times 27 = 206\ 496$	<hr/> <hr/> <input type="checkbox"/>
c) $2112 \times 18 = 38\ 006$	<hr/> <hr/> <input type="checkbox"/>

2) Which of these calculations has the closest answer to 500 000? Prove it by working out each calculation yourself.

a) 6587×72	
b) 7206×68	
c) 5982×84	



1) Identify the missing digits in these calculations.

	2		2	
×			3	2
<hr/>				
	4		5	4
7		8	1	0
	7	6		4

		4		5	3
	×				6
<hr/>					
		7			8
1	8		1	2	0
2		4	0		8

2) Carrie has created a calculation using digit cards but her cat has knocked the digit cards out of place. Can you put each digit card back in the right place to create Carrie's calculation?

6 3 4 2 3 5

×					
<hr/>					
	1	9	5	2	4
	9	7	6	2	0
1	1	7	1	4	4

Diving into Mastery



Multiply 4 Digits by 2 Digits

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

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.



Use long multiplication to complete these calculations.

$$3824 \times 32 = 122\,368$$

		3	8	2	4
		×		3	2
		7	6	4	8
		1			
1	1	4	7	2	0
1	2		1		
1	2	2	3	6	8
	1	1			

$$7506 \times 24 = 180\,144$$

		7	5	0	6
		×		2	4
		3	0	0	2
		3	2	2	4
1	5	0	1	2	0
1	1		1		
1	8	0	1	4	4

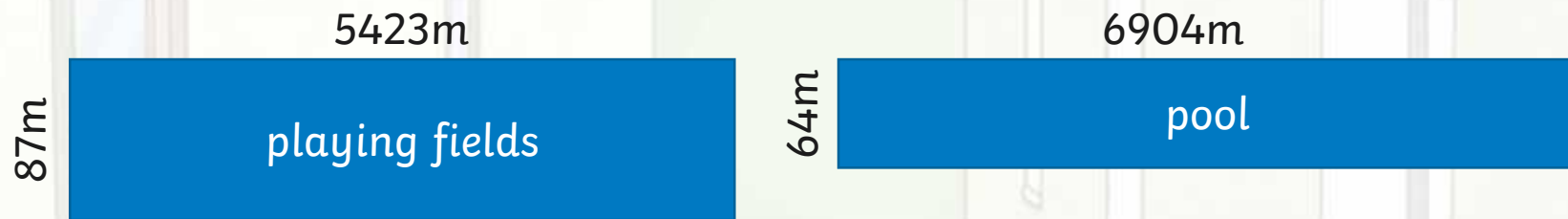
Multiply 4 Digits by 2 Digits

Diving



Here are plans of the playing fields and the outdoor pool in Twinkl Town.
(The plans are not to scale.)

Which has a greater area? Make a prediction and then calculate to find out if you were correct.



$$\text{Area of playing fields} = 5423\text{m} \times 87\text{m} = 471\,801\text{m}^2$$

$$\text{Area of pool} = 6904\text{m} \times 64\text{m} = 441\,856\text{m}^2$$

The playing fields have a greater area.

Multiply 4 Digits by 2 Digits

Deeper



Niamh has answered some calculations using long multiplication but she has not recorded her working out.

Tick the correct answers and cross the incorrect ones.

For each incorrect answer, explain the mistake she has made. You may need to work the calculations out yourself to help with this.

$2087 \times 65 = 22\ 957$	$4260 \times 35 = 149\ 100$	$6748 \times 27 = 47236$
<p>Incorrect. The correct answer is 135 655. Niamh has not inserted a placeholder so has calculated 2087×60. She has calculated 2087×6 instead.</p> <p><input type="checkbox"/></p>	<p>Correct.</p> <p><input checked="" type="checkbox"/></p>	<p>Incorrect. The correct answer is 182 196. Niamh has multiplied 6748 by 7 but she has forgotten to multiply 6748 by 20.</p> <p><input type="checkbox"/></p>



Multiply 4 Digits by 2 Digits

Deeper



Which of these calculations has the closest answer to 400 000? Prove it!

5287×74	6247×65
$5287 \times 74 = 391\,238$	$6247 \times 65 = 406\,055$
$400\,000 - 391\,238 = 8762$	$406\,055 - 400\,000 = 6055$

6247×65 has the closest answer to 400 000.

Multiply 4 Digits by 2 Digits

Deepest



Identify the missing digits in these calculations.

Here is one way of finding each answer.

		3	2	4	5
	×			3	6
	1	9 1	4 2	7 3	0
	9	7	3 1	5	0
1	1	6	8	2	0
		1	1		

		6	4	2	7
	×			4	2
	1	2	8	5 1	4
2	5	7	0	8	0
2	6	9	9	3	4
			1		

Multiply 4 Digits by 2 Digits

Deepest



Carrie has created a calculation using digit cards but her cat has knocked the digit cards out of place. Can you put each digit card back in the right place to create Carrie's calculation?

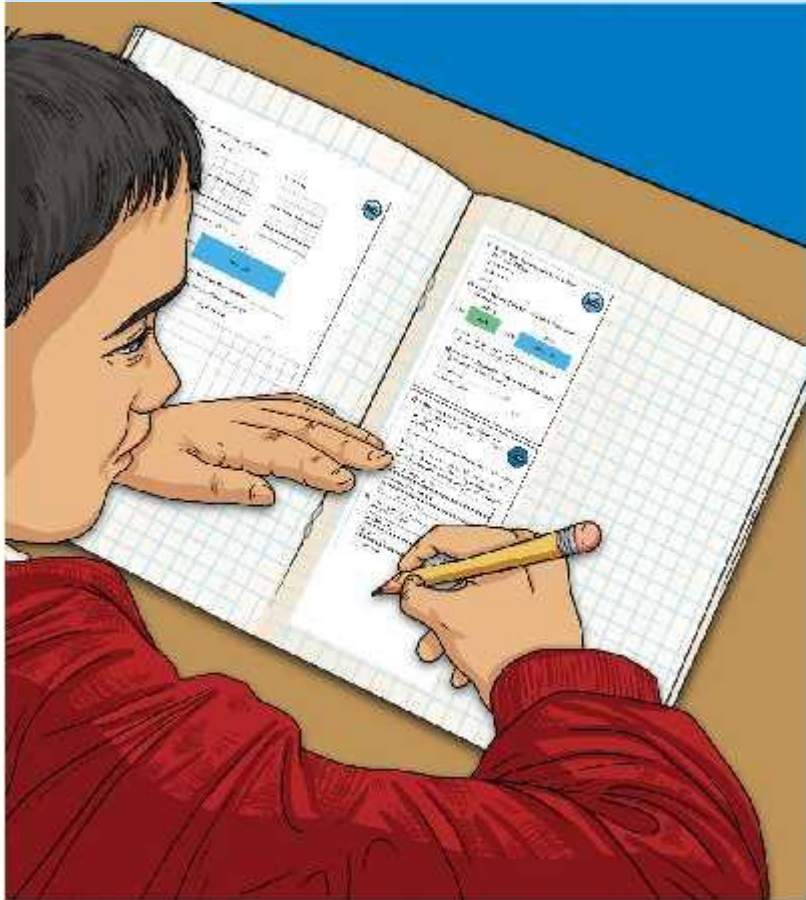


		6	5	0	2
	×			3	4
	2	6 2	0	0	8
1 1	9 1	5	0	6	0
2	2	1	0	6	8

1

Multiply 4 Digits by 2 Digits

Dive in by completing your own activity!



The screenshot shows a digital math activity interface. On the left, there is a vertical sidebar with a list of numbers: 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20. The main area contains a problem: "30) Multiply 4 Digits by 2 Digits". Below the problem, there are three columns for the multiplicand, multiplier, and product. The multiplicand is 1234, the multiplier is 23, and the product is 28382. There are also buttons for "Print" and "Share".

1234	23	28382
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- 1) a) Use long multiplication to complete these calculations.

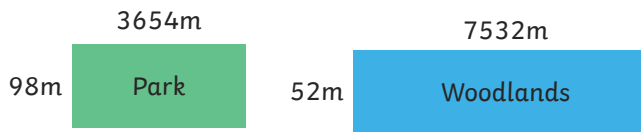
$$2238 \times 43$$

$$5604 \times 73$$

$$8516 \times 35$$



- 2) Here are plans of the park and the woodlands in Twinkl Town.



- a) Which do you predict will have a greater area – the park or the woodlands?

- b) Use long multiplication to calculate both areas to find out if you were correct.

Area of park = _____m²

Area of woodlands = _____m²

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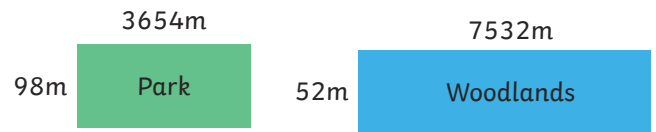
$$2238 \times 43$$

$$5604 \times 73$$

$$8516 \times 35$$



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Area of woodlands = _____m²

- 1) Helena has answered some calculations using long multiplication but she has not recorded her working out.



Tick the correct answers and cross the incorrect ones.

For each incorrect answer, explain the mistake she has made. To help with this, you may want to work out each calculation yourself.

a) $4520 \times 35 = 36\ 160$

b) $7648 \times 27 = 206\ 496$

c) $2112 \times 18 = 38\ 006$

- 2) Which of these calculations has the closest answer to 500 000? Prove it by working out each calculation yourself.

a) 6587×72

b) 7206×68

c) 5982×84

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	2		2	
×			3	2
<hr/>				
	4		5	4
7		8	1	0
	7	6		4

		4		5	3
	×				6
<hr/>					
			7		
					8
1	8		1	2	0
<hr/>					
2		4	0		8

2) Carrie has created a calculation using digit cards but her cat has knocked the digit cards out of place. Can you put each digit card back in the right place to create Carrie's calculation?

6	3	4	2	3	5
×					
<hr/>					
	1	9	5	2	4
	9	7	6	2	0
<hr/>					
1	1	7	1	4	4



1) Identify the missing digits in these calculations.

	2		2	
×			3	2
<hr/>				
	4		5	4
7		8	1	0
	7	6		4

		4		5	3
	×				6
<hr/>					
			7		
					8
1	8		1	2	0
<hr/>					
2		4	0		8

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6	3	4	2	3	5
×					
<hr/>					
	1	9	5	2	4
	9	7	6	2	0
<hr/>					
1	1	7	1	4	4