

# Homework/Extension

## Step 5: Multiply 4-Digits by 2-Digits

Teaching note: We have included grids for column multiplication and recommend that this resource is printed in colour or greyscale.

### National Curriculum Objectives:

Mathematics Year 5: (5C6a) [Multiply and divide numbers mentally drawing upon known facts](#)

Mathematics Year 5: (5C7a) [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](#)

### Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

**Developing** Solve the calculations and state which gives the larger answer by using the fully expanded method with no exchanges.

**Expected** Solve the calculations and state which gives the larger answer by using a formal multiplication method including exchanges.

**Greater Depth** Solve the calculations by finding the missing numbers and state which gives the larger answer by using a formal multiplication method including exchanges.

Questions 2, 5 and 8 (Varied Fluency)

**Developing** State whether a statement is correct by solving a calculation using the fully expanded method with no exchanges.

**Expected** State whether a statement is correct by solving a calculation using a formal multiplication method including exchanges.

**Greater Depth** State whether a statement is correct by finding the missing numbers in a multiplication calculation which includes exchanges.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

**Developing** Solve the calculations and then explain which is the odd one out. Calculations with no exchanges.

**Expected** Solve the calculations and then explain which is the odd one out. Calculations include exchanges.

**Greater Depth** Create and solve three multiplication calculations based on an odd one out statement. Calculations can include exchanges.

More [Year 5 Multiplication and Division](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

# Multiply 4-Digits by 2-Digits

1. Solve the calculations. Which calculation gives the larger answer?

A.

		1	1	1	3
x			2	2	

(2 x 3)  
 (2 x 10)  
 (2 x 100)  
 (2 x 1,000)  
 (20 x 3)  
 (20 x 10)  
 (20 x 100)  
 (20 x 1,000)  
 \_\_\_\_\_  
 Total

B.

		1	1	1	2
x			2	3	

(3 x 2)  
 (3 x 10)  
 (3 x 100)  
 (3 x 1,000)  
 (20 x 2)  
 (20 x 10)  
 (20 x 100)  
 (20 x 1,000)  
 \_\_\_\_\_  
 Total



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2. Sheraz thinks the area of the baking paper is  $96,427\text{cm}^2$ .



**Area:**  
 **$3,112\text{cm} \times 31\text{cm}$**

		3	1	1	2
x			3	1	

(1 x 1)  
 (1 x 10)  
 (1 x 100)  
 (1 x 3,000)  
 (30 x 2)  
 (30 x 10)  
 (30 x 100)  
 (30 x 3,000)  
 \_\_\_\_\_  
 Total

Is he correct?



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3. Solve the calculations to identify the odd one out. Explain your answer.

A.

		2	2	2	1
x			1	3	

(3 x 1)  
 (3 x 20)  
 (3 x 200)  
 (3 x 2,000)  
 (10 x 1)  
 (10 x 20)  
 (10 x 200)  
 (10 x 2,000)  
 \_\_\_\_\_  
 Total

B.

		1	2	2	3
x			1	2	

(2 x 3)  
 (2 x 20)  
 (2 x 200)  
 (2 x 1,000)  
 (10 x 3)  
 (10 x 20)  
 (10 x 200)  
 (10 x 1,000)  
 \_\_\_\_\_  
 Total

C.

		2	1	1	2
x			1	4	

(4 x 2)  
 (4 x 10)  
 (4 x 100)  
 (4 x 2,000)  
 (10 x 2)  
 (10 x 10)  
 (10 x 100)  
 (10 x 2,000)  
 \_\_\_\_\_  
 Total



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# Multiply 4-Digits by 2-Digits

4. Solve the calculations.

A.

		7	1	4	1
x				1	6
<hr/>					
<hr/>					
<hr/>					

B.

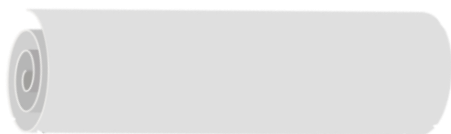
		6	1	4	1
x				1	7
<hr/>					
<hr/>					
<hr/>					

Which calculation gives the larger answer?



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5. Kaidi thinks the area of the wrapping paper is  $51,936\text{cm}^2$ .



Area:  
 $1,036\text{cm} \times 51\text{cm}$

x					
<hr/>					
<hr/>					
<hr/>					

Is she correct?



VF  
HW/Ext

6. Solve the calculations to identify the odd one out.

A.

		1	0	3	2
x				2	6
<hr/>					
<hr/>					
<hr/>					

B.

		2	1	1	1
x				2	1
<hr/>					
<hr/>					
<hr/>					

C.

		6	3	1	2
x				3	1
<hr/>					
<hr/>					
<hr/>					

Explain your answer.



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# Multiply 4-Digits by 2-Digits

7. Find the missing numbers and solve the calculations.

A.

		6	2	3	1
x				<input type="text"/>	<input type="text"/>
<hr/>					
		<input type="text"/>	<input type="text"/>	<input type="text"/>	1
	<input type="text"/>	<input type="text"/>	6	2	0
<hr/>					
<hr/>					

B.

		3	8	0	4
x				3	<input type="text"/>
<hr/>					
		<input type="text"/>	<input type="text"/>	<input type="text"/>	8
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<hr/>					
<hr/>					

Which calculation gives the larger answer?



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8. Ali has calculated the area of one roll of tin foil. Find the missing numbers and complete the calculation.

A.



B.



		2	3	0	6
x				4	<input type="text"/>
<hr/>					
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	4
	<input type="text"/>	<input type="text"/>	<input type="text"/>	4	<input type="text"/>
<hr/>					
				9	
<hr/>					

Which roll of tin foil did he find the area of?



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9. Create three calculations where a 4-digit number is multiplied by a 2-digit number to make the following statement true:

Calculation A is the odd one out because the answer is an even 6-digit number.

A.

x					
<hr/>					
<hr/>					
<hr/>					

B.

x					
<hr/>					
<hr/>					
<hr/>					

C.

x					
<hr/>					
<hr/>					
<hr/>					



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## Homework/Extension Multiply 4-Digits by 2-Digits

### Developing

1. A.  $1,113 \times 22 = 24,486$ ; B.  $1,112 \times 23 = 25,576$ . Calculation B has the larger answer.
2. No, Sheraz is incorrect. The correct answer is  $96,472\text{cm}^2$ .
3. A. 28,873; B. 14,676; C. 29,568. Various explanations for which is the odd one out, for example: A is the odd one out because the answer is an odd number. The answers to B and C are both even numbers.

### Expected

4. A.  $7,141 \times 16 = 114,256$ ; B.  $6,141 \times 17 = 104,397$ . Calculation A has the larger answer.
5. No, Kaidi is incorrect. The correct answer is  $52,836\text{cm}^2$ .
6. A. 26,832; B. 44,331; C. 195,672. Various explanations for which is the odd one out, for example: C is the odd one out because the answer is a 6-digit number. The answers to A and B are both 5-digit numbers.

### Greater Depth

7. A.  $6,231 \times 21 = 130,851$ ; B.  $3,804 \times 32 = 121,728$ . Calculation A has the larger answer.
- 8.

		2	3	0	6
x				4	9
	2	0	7	5	4
		2		5	
	9	2	2	4	0
1	1	2	9	9	4

Ali found the area of roll B.

9. Various answers where calculation A has an even 6-digit number as the answer, for example: A.  $4,427 \times 34 = 150,518$ ; B.  $4,427 \times 13 = 57,551$ ; C.  $4,427 \times 15 = 66,405$ , A.  $4,421 \times 34 = 150,314$ ; B.  $4,421 \times 17 = 75,157$ ; C.  $4,421 \times 21 = 92,841$ , A.  $5,781 \times 18 = 104,058$ ; B.  $5,781 \times 11 = 63,591$ ; C.  $5,781 \times 13 = 75,153$