

Reasoning and Problem Solving

Step 4: Multiply 2 Digits by 1 Digit 2

National Curriculum Objectives:

Mathematics Year 3: (3C6) [Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables](#)

Mathematics Year 3: (3C7) [Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods](#)

Mathematics Year 3: (3C8) [Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which \$n\$ objects are connected to \$m\$ objects](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Find the 2-digit number to complete the calculation with a given total; some exchanging. Includes 2, 3, 4, 5 and 8 times tables and one exchange.

Expected Find the 2-digit and 1-digit numbers which multiply together to make a given total. Includes 2, 3, 4, 5 and 8 times tables, exchanges and incomplete calculations.

Greater Depth Find the 2-digit and 1-digit numbers which multiply together to make a partially given total. Includes 2, 3, 4, 5 and 8 times tables, exchanges and missing numbers within calculations.

Questions 2, 5 and 8 (Problem Solving)

Developing Arrange the digits to make a 2-digit multiplied by 1-digit calculation to reach a target number. Includes 2, 3, 4, 5 and 8 times tables, one exchange and scaffolding.

Expected Arrange the digits to make a 2-digit multiplied by 1-digit calculation to reach a target number. Includes 2, 3, 4, 5 and 8 times tables, exchanges and incomplete calculations.

Greater Depth Arrange the digits to make two 2-digit multiplied by 1-digit calculations which have the same total. Includes 2, 3, 4, 5 and 8 times tables, exchanges and missing numbers within calculations.

Questions 3, 6 and 9 (Reasoning)

Developing Find, explain and correct the mistake when multiplying a 2-digit number by a 1-digit number. Includes 2, 3, 4, 5 and 8 times tables, one exchange, pictorial representations and scaffolding.

Expected Find, explain and correct the mistake when multiplying a 2-digit number by a 1-digit number. Includes 2, 3, 4, 5 and 8 times tables, exchanges, some pictorial support and incomplete calculations.

Greater Depth Find and explain the mistake when multiplying a 2-digit number by a 1-digit number. Includes 2, 3, 4, 5 and 8 times tables, exchanges and missing numbers within calculations.

More [Year 3 Multiplication and Division](#) resources.

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

Multiply 2 Digits by 1 Digit 2

Multiply 2 Digits by 1 Digit 2

1a. Sam multiplies a 2-digit number by a 1-digit number. Which numbers did he use?

$$\square \times 3 = 96$$

12 34 32

x			3
<hr/>			
		9	6
<hr/>			



PS

1b. Abi multiplies a 2-digit number by a 1-digit number. Which numbers did she use?

$$\square \times 2 = 68$$

23 31 34

x			2
<hr/>			
		6	8
<hr/>			



PS

2a. Eve and Abe each have three digits to arrange to multiply and reach the target number. Who can get nearest?

130

4 3 2 4 5 3



Eve

x			4
<hr/>			
<hr/>			

x			3
<hr/>			
<hr/>			



Abe



PS

2b. Arthur and Ciara each have three digits to arrange to multiply and reach the target number. Who can get nearest?

150

5 3 2 4 8 2



Arthur

x			3
<hr/>			
<hr/>			

x			2
<hr/>			
<hr/>			



Ciara



PS

3a. Kim's teacher asks her to find, explain and correct her mistake.

Tens	Ones
10	1 1 1
10	1 1 1
10	1 1 1
10	1 1 1
10	1 1 1
10	1 1 1
10	1 1 1
10	1 1 1

		1	3
x			8
<hr/>			
		8	4
<hr/>			
		2	



R

3b. Sam's teacher asks him to find, explain and correct his mistake.

Tens	Ones
10 10 10	1 1 1 1 1
10 10 10	1 1 1 1 1

		3	5	
x			2	
<hr/>				
		6	1	0
<hr/>				



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Multiply 2 Digits by 1 Digit 2

Multiply 2 Digits by 1 Digit 2

4a. Sara multiplies a 2-digit number by a 1-digit number. Which numbers did she use?

3 4 23 31 42

x			
<hr/>			
	1	6	8
<hr/>			
	1		



PS

4b. Tom multiplies a 2-digit number by a 1-digit number. Which numbers did he use?

5 21 25 4 32

x			
<hr/>			
	1	0	5
<hr/>			
	1		



PS

5a. Noah and Layla are trying to get an answer near to the target number. Arrange their three digits to make a 2 digit by 1 digit multiplication calculation with the nearest answer.

Noah **165** Layla

5 2 8 2 5 3



PS

5b. Zara and Alfie are trying to get an answer near to the target number. Arrange their three digits to make a 2 digit by 1 digit multiplication calculation with the nearest answer.

Zara **300** Alfie

4 3 8 3 5 8



PS

6a. Joe's teacher asks him to find, explain and correct his mistake.

Tens	Ones
10 10	1 1 1

			2	3
x				5
<hr/>				
	1	0	1	5
<hr/>				



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6b. Mia's teacher asks her to find, explain and correct her mistake.

Tens	Ones
10 10 10	1 1 1 1
	1 1 1

			4	7
x				4
<hr/>				
	1	6		8
<hr/>				
		2		



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Multiply 2 Digits by 1 Digit 2

Multiply 2 Digits by 1 Digit 2

7a. Lola multiplies a 2-digit number by a 1-digit number. Which numbers did she use?

$$\square \times \square = \square$$

- 28 34 8 46 6

x			
	2		2



PS

7b. Tom multiplies a 2-digit number by a 1-digit number. Which numbers did he use?

$$\square \times \square = \square$$

- 52 7 54 8 53

x			
	4		2



PS

8a. Cora and Enzo arrange their three digits to make a calculation with the same answer. What could their calculations and answers be?



Enzo

- 5 2 8



Cora

- 3 4 5



PS

8b. Luca and Faith arrange their three digits to make a calculation with the same answer. What could their calculations and answers be?



Luca

- 6 4 4



Faith

- 8 3 2



PS

9a. Max is multiplying 53 by 8, he gets the answer 404. Use the formal method to explain if he is correct.

x			



R

9b. Eve is multiplying 43 by 6, she gets the answer 2418. Use the formal method to explain if she is correct.

x			



R

Reasoning and Problem Solving Multiply 2 Digits by 1 Digit 2

Developing

- 1a. $32 \times 3 = 96$
2a. Eve can make $32 \times 4 = 128$ and Abe can make $43 \times 3 = 129$, so Abe is the nearest to 130.
3a. Kim has not added the tens she exchanged from the ones column. The correct answer is 104.

Expected

- 4a. $42 \times 4 = 168$
5a. Noah can make $85 \times 2 = 170$; Layla can make $32 \times 5 = 160$. This is the nearest they can both get to 165.
6a. Joe has not shown the exchange correctly. He needs to show the exchange under his calculation and add it to the correct column. The correct answer is 115.

Greater Depth

- 7a. $34 \times 8 = 272$
8a. Two possible answers: $28 \times 5 = 140$ and $35 \times 4 = 140$; $85 \times 2 = 170$ and $34 \times 5 = 170$.
9a. Max has not added the tens he exchanged from the ones column. The correct answer is 424.

Reasoning and Problem Solving Multiply 2 Digits by 1 Digit 2

Developing

- 1b. $34 \times 2 = 68$
2b. Arthur can make $52 \times 3 = 156$, Ciara can make $84 \times 2 = 168$, so Arthur is the nearest to 150.
3b. Sam has not shown the exchange correctly. He should show the ten he exchanged under his calculation and add it on after multiplying 3 tens by 2. The correct answer is 70.

Expected

- 4b. $21 \times 5 = 105$
5b. Zara can make $34 \times 8 = 272$; Alfie can make $35 \times 8 = 280$, so Alfie is the nearest to 300.
6b. Mia has not added the tens she exchanged from the ones column. The correct answer is 188.

Greater Depth

- 7b. $54 \times 8 = 432$
8b. Two possible answers: 46×4 and $23 \times 8 = 184$; 64×4 and $32 \times 8 = 256$.
9b. Eve has not carried the exchanges correctly. She needs to show the exchange under her calculation and add it to the correct column. The correct answer is 258.