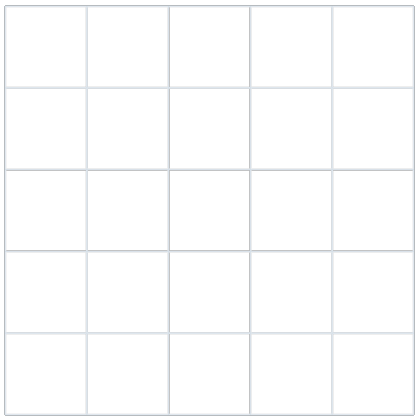
Year 4 - Column Multiplication — Lesson Guide

Step 1

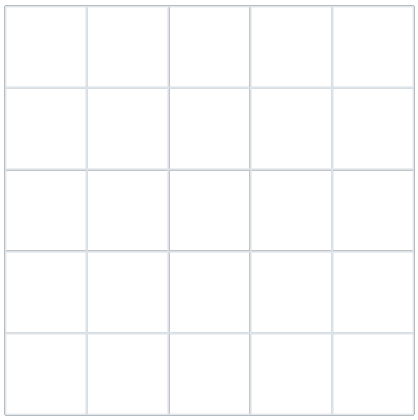
235 × 7 = ☐



First, we circle the multiplication sign so we know to multiply the two factors and find their product.

Step 2

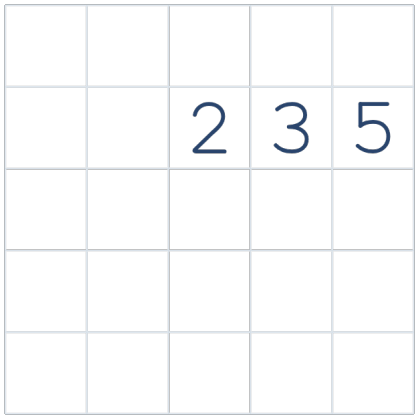
235 × 7 = ☐



First, check whether a mental method would be quicker. I can see two exchanges, so I think column multiplication will help.

Step 3

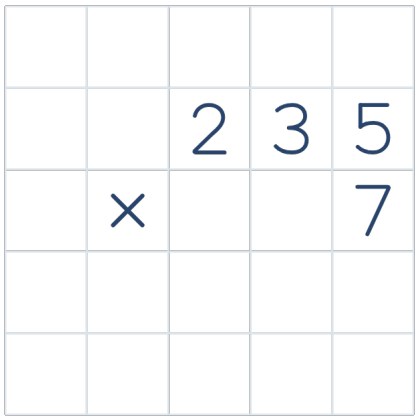
235 × 7 = ☐



The first digit of 235, 2, is in the hundreds column, so we start there. Now, we write 235 in the correct columns, with one digit in each box.

Step 4

235 × 7 = ☐

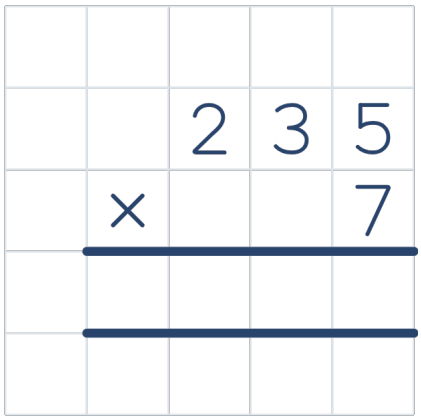


Remember: There must always be a digit in the ones column, even if it is a 0.

Then, we write the multiplication sign on the left and 7 in the ones column. We are multiplying by 7 ones.

Step 5

235 × 7 = ☐



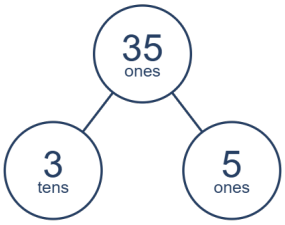
Draw a line under 7. Leave one row for the product, then draw the second line below that row. Write exchanges below the second line.

Step 6

235 × 7 = ☐

		2	3	5
	×			7

First, we multiply the ones, the smallest place-value column. 5 ones × 7 = 35 ones. As we can only write one digit per box, we partition 35 ones into 3 tens and 5 ones.



Step 7

235 × 7 = ☐

		2	3	5
	×			7
				5
			3	

We write the 3 tens in the tens column underneath the answer, ready for the next step. Then we write the remaining 5 ones in the ones answer box.

Step 8

235 × 7 = ☐

		2	3	5
	×			7
				5
			3	

Remember: Check both places. Keep the small 3 below the tens column and the 5 in the ones answer square.

The small 3 below the tens column stands for 3 tens. The 5 in the ones answer square stands for 5 ones. Together, they make 35 ones.

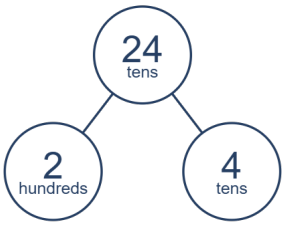
Step 9

235 × 7 = ☐

		2	3	5
	×			7
				5
			3	

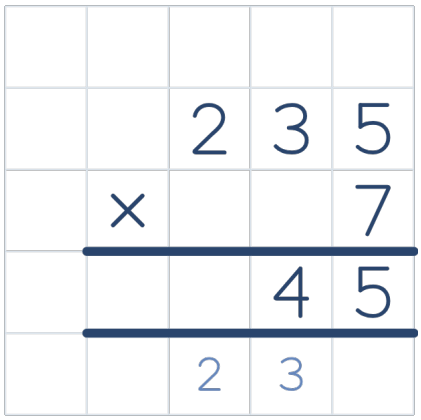
Remember: Look below the column you are working on. Add the exchanged amount written there.

Next, we multiply the tens. 3 tens × 7 = 21 tens. Add the 3 exchanged tens shown by the small 3 below the tens column. 21 tens + 3 exchanged tens = 24 tens. As we can only write one digit per box, we partition 24 tens into 2 hundreds and 4 tens.



Step 10

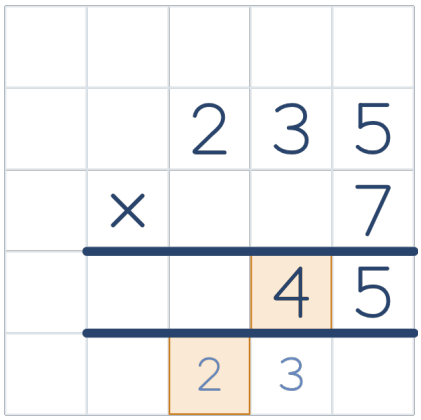
235 × 7 = ☐



We write the 2 hundreds in the hundreds column underneath the answer, ready for the next step. Then we write the remaining 4 tens in the tens answer box.

Step 11

235 × 7 = ☐

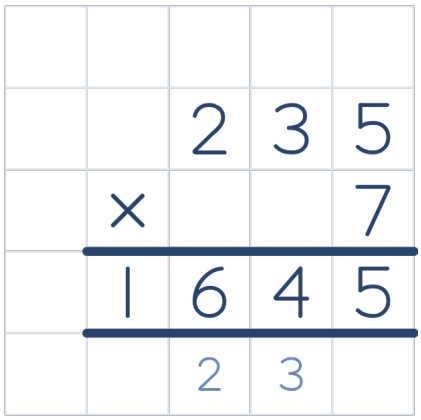


Remember: Check both places. Keep the small 2 below the hundreds column and the 4 in the tens answer square.

The small 2 below the hundreds column stands for 2 hundreds. The 4 in the tens answer square stands for 4 tens. Together, they make 24 tens.

Step 12

235 × 7 = ☐

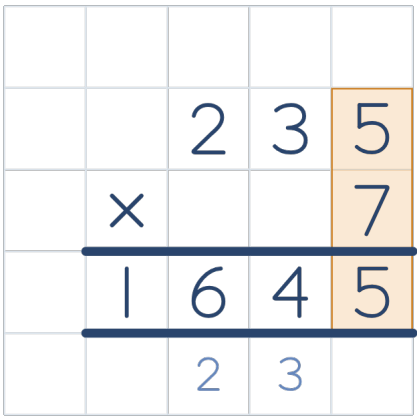


Remember: Look below the column you are working on. Add the exchanged amount written there.

Finally, we multiply the hundreds. 2 hundreds × 7 = 14 hundreds. Add the 2 exchanged hundreds shown by the small 2 below the hundreds column. 14 hundreds + 2 exchanged hundreds = 16 hundreds. This is the last column, so we write 1 thousand and 6 hundreds directly in the answer row, with one digit in each box.

Step 13

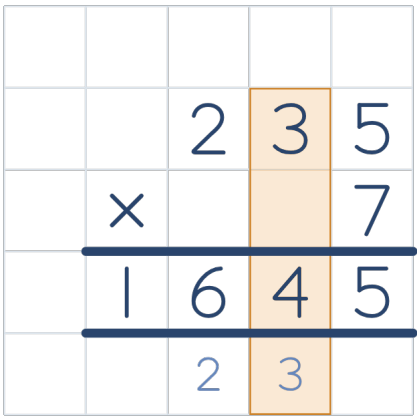
235 × 7 = ☐



Our product is 1,645. Before we copy our answer into the answer box, let's check each column, including the exchanges. First, we check the ones: 5 ones × 7 = 35 ones. We have correctly written 3 tens underneath and 5 ones in the answer row.

Step 14

235 × 7 = ☐

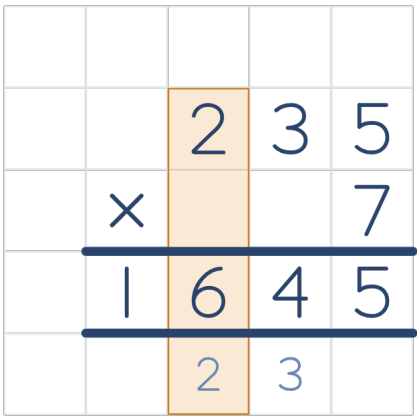


Remember: Look below the column you are working on. Add the exchanged amount written there.

Next, we check the tens: 3 tens × 7 = 21 tens. Add the 3 exchanged tens shown by the small 3 below the tens column. 21 tens + 3 exchanged tens = 24 tens. We have correctly written 2 hundreds underneath and 4 tens in the answer row.

Step 15

235 × 7 = ☐

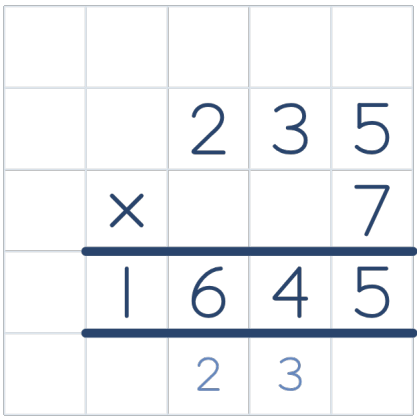


Remember: Look below the column you are working on. Add the exchanged amount written there.

Finally, we check the hundreds: 2 hundreds × 7 = 14 hundreds. Add the 2 exchanged hundreds shown by the small 2 below the hundreds column. 14 hundreds + 2 exchanged hundreds = 16 hundreds. We have correctly written 16 in the answer row, using the correct place-value columns.

Step 16

235 × 7 = **1645**



The product is 1645. Copy 1645 into the answer box. Make sure you copy the answer correctly.