Year 5 - Column Addition — Lesson Guide

Step 1

18,526 + 11,495 = ☐

First, we circle the plus sign so we know to add the two parts and find their sum.

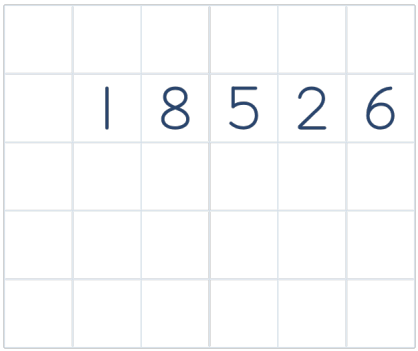
Step 2

18,526 + 11,495 = ☐

First, check whether a mental method would be quicker. Look at the ones. 6 ones and 5 ones make 11 ones. We can exchange 10 ones for 1 ten. Column addition keeps the place values lined up.

Step 3

18,526 + 11,495 = ☐



The first digit of 18,526, 1, is in the ten thousands column, so we start there. Now, we write 18,526 in the correct columns, with one digit in each box.

Step 4

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5

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

Then, we write a plus sign on the left of the calculation. 11,495 has five digits, so we start with 1 in the ten thousands column. We write 11,495 in the correct columns, with one digit in each box.

Step 5

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5

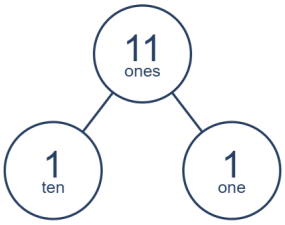
Draw a line under 11,495. Leave one row for the sum, then draw the second line below that row. Write exchanges below the second line.

Step 6

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5

First, we add the ones, the smallest place-value column. 6 ones + 5 ones = 11 ones. As we can only write one digit per box, we partition 11 ones into 1 ten and 1 one.



Step 7

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5
					1
				1	

We write the 1 ten in the tens column underneath the answer, ready for the next step. Then we write the remaining 1 one in the ones answer box.

Step 8

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5
					1
				1	

Remember: Check both places. Keep the small 1 below the tens column and the 1 in the ones answer square.

The small 1 below the tens column stands for 1 ten. The 1 in the ones answer square stands for 1 one. Together, they make 11 ones.

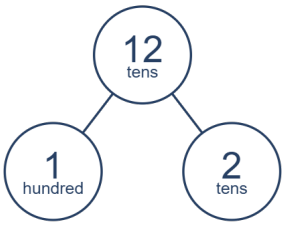
Step 9

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5
					1
				1	

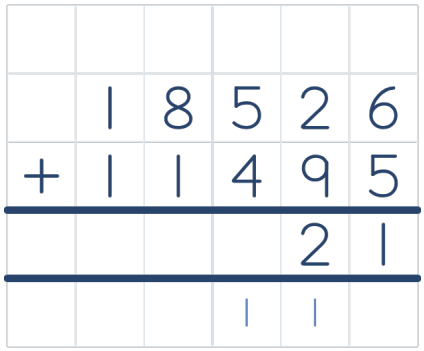
Remember: Look below the column you are working on. Add the exchanged amount written there.

Next, we add the tens. 2 tens + 9 tens = 11 tens. Add the 1 exchanged ten shown by the small 1 below the tens column. 11 tens + 1 exchanged ten = 12 tens. As we can only write one digit per box, we partition 12 tens into 1 hundred and 2 tens.



Step 10

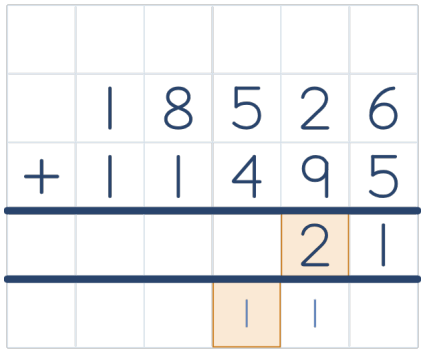
18,526 + 11,495 = ☐



We write the 1 hundred in the hundreds column underneath the answer, ready for the next step. Then we write the remaining 2 tens in the tens answer box.

Step 11

18,526 + 11,495 = ☐



Remember: Check both places. Keep the small 1 below the hundreds column and the 2 in the tens answer square.

The small 1 below the hundreds column stands for 1 hundred. The 2 in the tens answer square stands for 2 tens. Together, they make 12 tens.

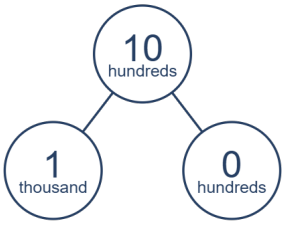
Step 12

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5
				2	1
			1	1	

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

Next, we add the hundreds. 5 hundreds + 4 hundreds = 9 hundreds. Add the 1 exchanged hundred shown by the small 1 below the hundreds column. 9 hundreds + 1 exchanged hundred = 10 hundreds. As we can only write one digit per box, we partition 10 hundreds into 1 thousand and 0 hundreds.



Step 13

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5
			0	2	1
		1	1	1	

We write the 1 thousand in the thousands column underneath the answer, ready for the next step. Then we write the remaining 0 hundreds in the hundreds answer box.

Step 14

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5
			0	2	1
		1			

Remember: Check both places. Keep the small 1 below the thousands column and the 0 in the hundreds answer square.

The small 1 below the thousands column stands for 1 thousand. The 0 in the hundreds answer square stands for 0 hundreds. Together, they make 10 hundreds.

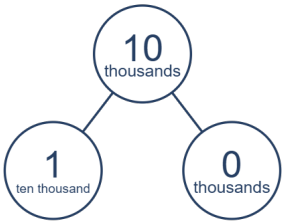
Step 15

18,526 + 11,495 = ☐

	1	8	5	2	6
+	1	1	4	9	5
			0	2	1
		1			

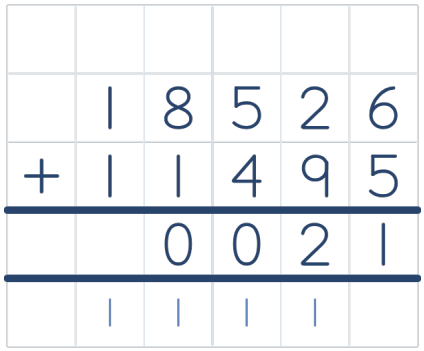
Remember: Look below the column you are working on. Add the exchanged amount written there.

After that, we add the thousands. 8 thousands + 1 thousand = 9 thousands. Add the 1 exchanged thousand shown by the small 1 below the thousands column. 9 thousands + 1 exchanged thousand = 10 thousands. As we can only write one digit per box, we partition 10 thousands into 1 ten thousand and 0 thousands.



Step 16

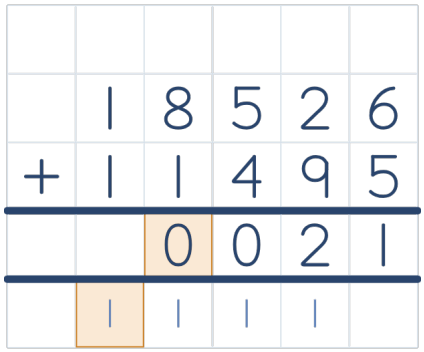
18,526 + 11,495 = ☐



We write the 1 ten thousand in the ten thousands column underneath the answer, ready for the next step. Then we write the remaining 0 thousands in the thousands answer box.

Step 17

18,526 + 11,495 = ☐

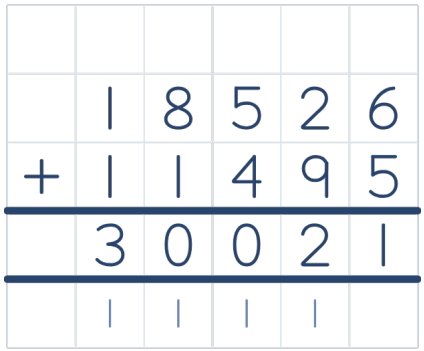


Remember: Check both places. Keep the small 1 below the ten thousands column and the 0 in the thousands answer square.

The small 1 below the ten thousands column stands for 1 ten thousand. The 0 in the thousands answer square stands for 0 thousands. Together, they make 10 thousands.

Step 18

18,526 + 11,495 = ☐

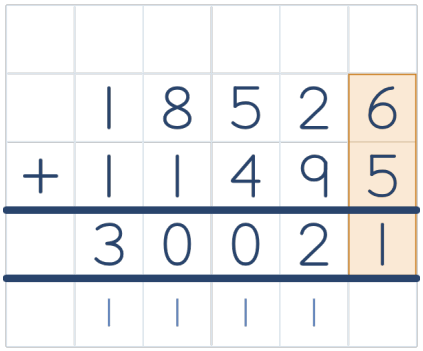


Remember: Look below the column you are working on. Add the exchanged amount written there.

Finally, we add the ten thousands. 1 ten thousand + 1 ten thousand = 2 ten thousands. Add the 1 exchanged ten thousand shown by the small 1 below the ten thousands column. 2 ten thousands + 1 exchanged ten thousand = 3 ten thousands. We write 3 in the ten thousands column. No exchange is needed this time.

Step 19

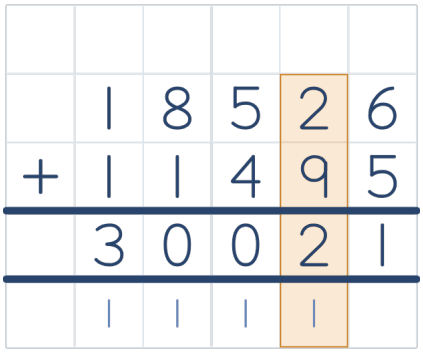
18,526 + 11,495 = ☐



Our sum is 30,021. Before we copy our answer into the answer box, let's check each column, including the exchanges. First, we check the ones: 6 + 5 = 11. We have correctly recorded 1 ten underneath the answer and 1 one in the ones answer box.

Step 20

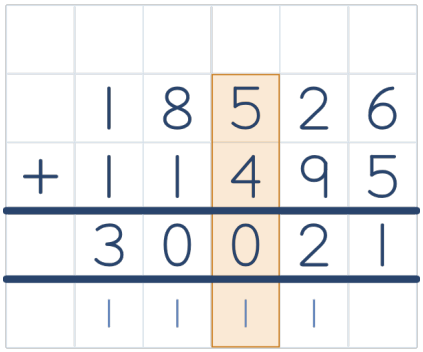
18,526 + 11,495 = ☐



Next, we check the tens, including the exchanged ten: 2 + 9 + 1 = 12. We have correctly recorded 1 hundred underneath the answer and 2 tens in the tens answer box.

Step 21

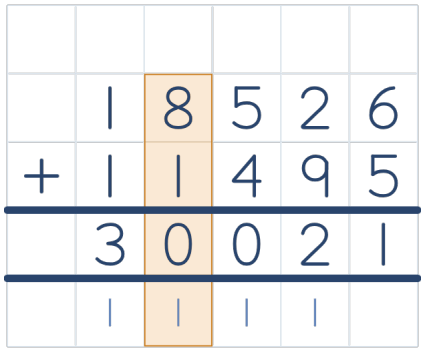
18,526 + 11,495 = ☐



Then, we check the hundreds, including the exchanged hundred: 5 + 4 + 1 = 10. We have correctly recorded 1 thousand underneath the answer and 0 hundreds in the hundreds answer box.

Step 22

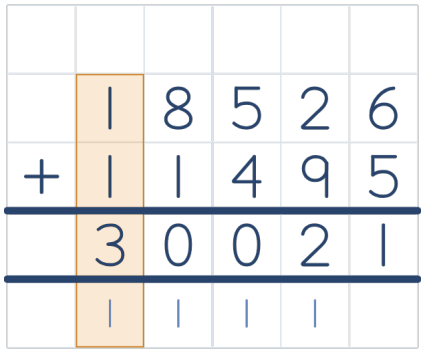
18,526 + 11,495 = ☐



After that, we check the thousands, including the exchanged thousand: 8 + 1 + 1 = 10. We have correctly recorded 1 ten thousand underneath the answer and 0 thousands in the thousands answer box.

Step 23

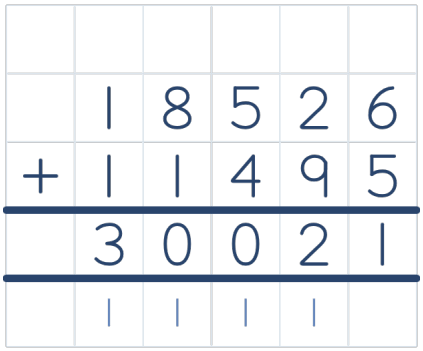
18,526 + 11,495 = ☐



Finally, we check the ten thousands, including the exchanged ten thousand: 1 + 1 + 1 = 3. We have correctly included the exchanged ten thousand and written 3 in the ten thousands answer box.

Step 24

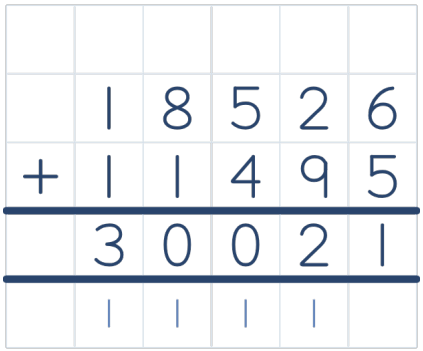
18,526 + 11,495 = **30021**



The sum is 30021. Copy 30021 into the answer box. Make sure you copy the answer correctly.

Step 25

18,526 + 11,495 = **30021**



We can round to check whether our sum makes sense. Round 18,526 to 19,000 and 11,495 to 11,000, both to the nearest thousand. 19,000 + 11,000 = 30,000. Each number changes by at most 500. Our exact answer, 30,021, is within 1,000 of the estimate.