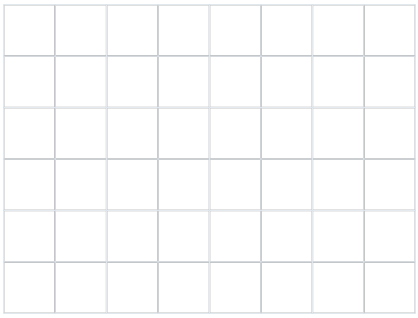
Year 6 - Short Division with a Remainder — Lesson Guide

Step 1

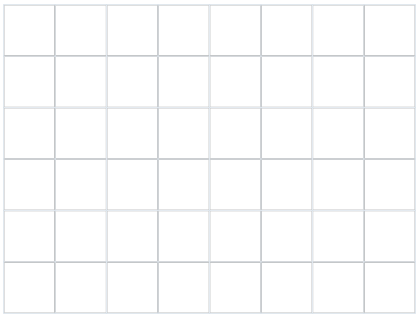
925 ÷ 4 = ☐



First, we circle the division sign so we know to divide and find the quotient.

Step 2

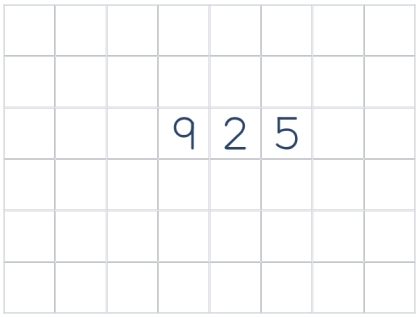
925 ÷ 4 = ☐



First, check whether a mental method would be quicker. I can see one exchange, so I think short division will help.

Step 3

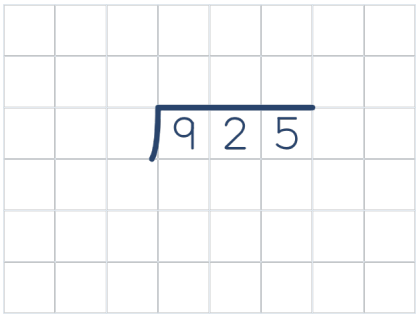
925 ÷ 4 = ☐



The dividend is 925, the number we are dividing. We leave a row above the dividend for the quotient, our answer. The first digit of 925, 9, is in the hundreds column, so we start there. We write 925 in the correct columns, with one digit in each box.

Step 4

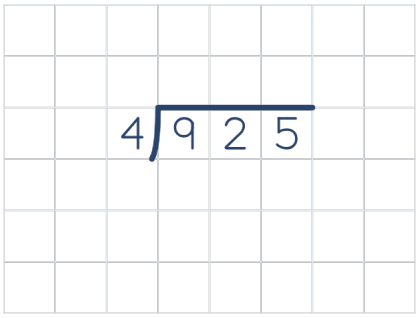
925 ÷ 4 = ☐



After that, we draw a short curved line on the left of the dividend and a straight line above it. We have kept the row above the line for our quotient.

Step 5

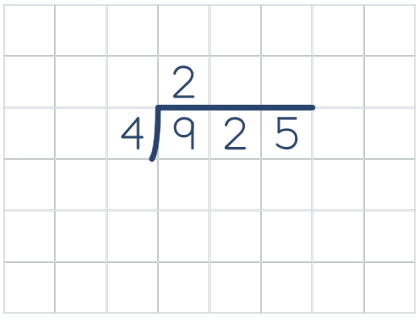
925 ÷ 4 = ☐



Then, we write 4 on the left of the curved line. This is the divisor, the number we are dividing by.

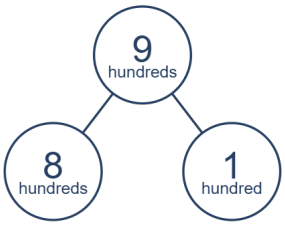
Step 6

925 ÷ 4 = ☐



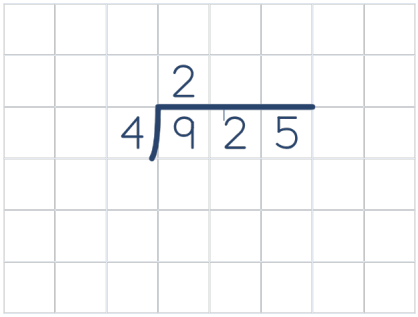
Remember: A digit above the hundreds column tells us how many hundreds are in each group.

Start at the hundreds. Share 9 hundreds equally into 4 groups. Each group gets 2 hundreds and 1 hundred is left over. Write 2 in the hundreds answer square above the line. We will exchange the 1 hundred left over in the next step.



Step 7

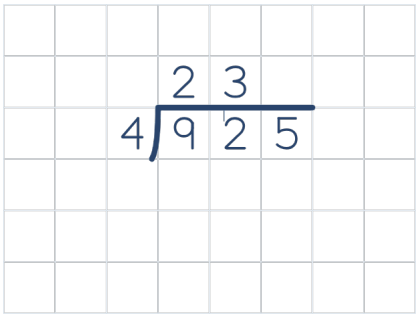
925 ÷ 4 = ☐



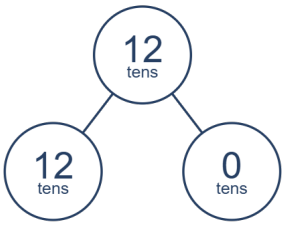
Now, we exchange the 1 hundred left over for 10 tens. We write a smaller 1 at the top left of the next square, to the left of the 2 already there. Together they show 12 tens, ready for the next step.

Step 8

925 ÷ 4 = ☐

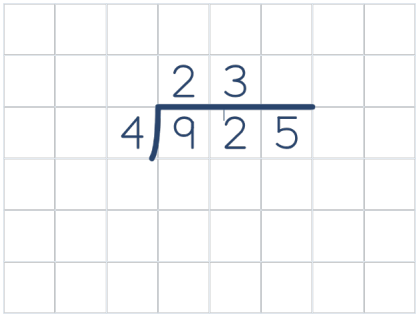


Read the small 1 and the 2 together as 12 tens. The small 1 stands for 10 tens exchanged from the hundreds column. Divide 12 tens by 4. Each group gets 3 tens. Write 3 in the tens answer square above the line.



Step 9

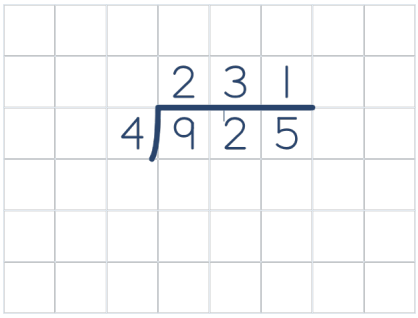
925 ÷ 4 = ☐



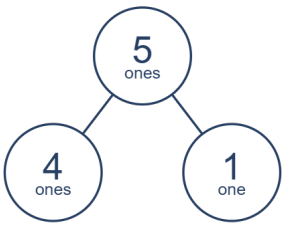
We have shared all 12 tens equally into 4 groups. There are no tens left to exchange. Move to the 5 in the ones column.

Step 10

925 ÷ 4 = ☐

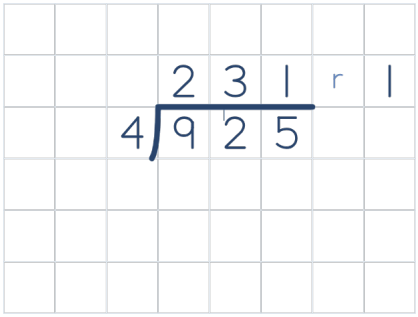


Share 5 ones equally into 4 groups. Each group gets 1 one and 1 one is left over. Write 1 in the ones answer square above the line.



Step 11

925 ÷ 4 = ☐

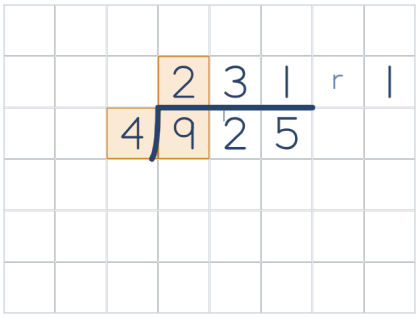


Remember: If enough is left to make another group, increase the quotient and check the remainder again.

We can make 231 groups of 4, with 1 left over. Read the quotient as 231 remainder 1. Write r followed by 1 to the right of the quotient. 1 is smaller than 4, so there is not enough for another group.

Step 12

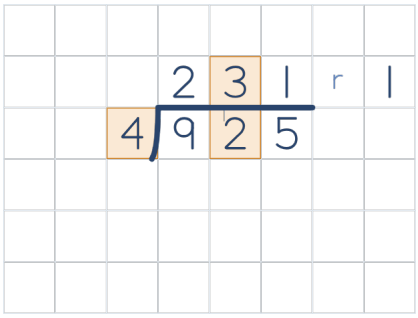
925 ÷ 4 = ☐



Our quotient is 231 with remainder 1. Before we copy our answer into the answer box, let's check each column, including the exchanges. First, we check the hundreds. We ask again, "How many 4s are in 9?" 2 groups of 4 make 8, with 1 left over. We have written 2 above this column. We have exchanged the 1 hundred left over into the next column.

Step 13

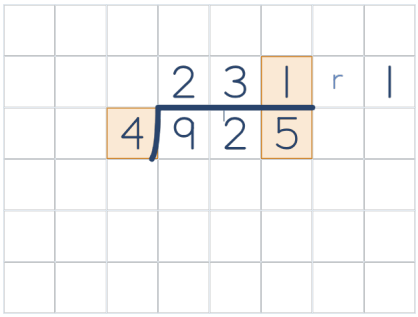
925 ÷ 4 = ☐



Next, we check the tens. We ask again, "How many 4s are in 12?" 3 groups of 4 make 12. We have written 3 above this column. There is nothing left over in this column.

Step 14

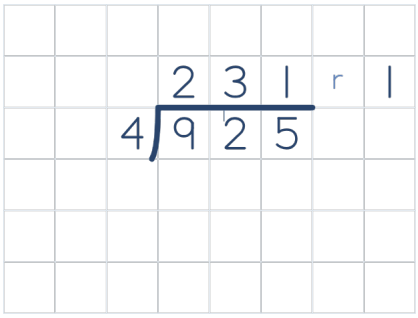
925 ÷ 4 = ☐



Finally, we check the ones. We ask again, "How many 4s are in 5?" 1 group of 4 makes 4, with 1 left over. We have written 1 above this column. The remainder, 1, is smaller than the divisor, 4.

Step 15

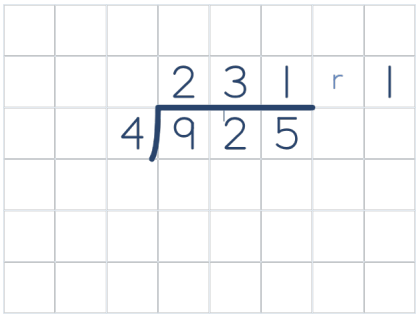
925 ÷ 4 = **231r1**



The quotient is 231, with a remainder of 1. Write 231r1 in the answer box. Make sure you copy the answer correctly.

Step 16

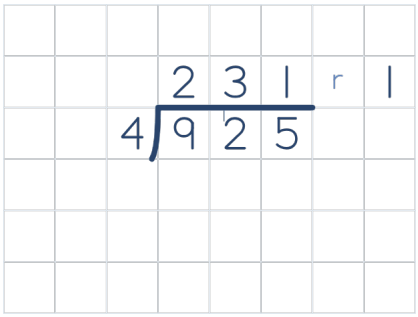
925 ÷ 4 = **231r1**



Imagine packing 925 books into boxes that hold 4 each. We can fill 231 boxes, with 1 book left over. If we need to pack every book, we need one more box. That makes 232 boxes altogether.

Step 17

925 ÷ 4 = **231r1**



When the amount can be split further, exchange the 1 left over for 100 hundredths. Share those equally into 4 groups. Each group gets 25 hundredths, or 1 quarter, as well as 231 wholes. Each group gets 231.25 altogether.