

Home learning - Session 4

Fluency 15 - Year 5 expected standard

Focus learning: long multiplication

1 Write the numbers above each other in the correct columns.

$$\begin{array}{r} 154 \\ \times 26 \\ \hline \end{array}$$

2 First, multiply the ones in the three-digit number by the ones in the two-digit number.

4 ones \times 6 ones = 24 ones = 2 tens and 4 ones

$$\begin{array}{r} 2 \\ 154 \\ \times 26 \\ \hline 4 \end{array}$$

Write 4 in the answer section and regroup the 2 tens by writing 2 above the tens column.

3 Next, multiply the tens in the three-digit numbers by the ones digits in the two-digit number and add any regrouped tens.

5 tens \times 6 = 30 tens + 2 tens = 32 tens = 3 hundreds and 2 tens

$$\begin{array}{r} 32 \\ 154 \\ \times 26 \\ \hline 24 \end{array}$$

Write 2 in the answer section and regroup the 3 hundreds by writing 3 above the hundreds column.

4 Finally, multiply the hundreds in the three-digit numbers by the ones digits in the two-digit number and add any regrouped hundreds.

1 hundred \times 6 = 6 hundreds + 3 hundreds = 9 hundreds

$$\begin{array}{r} 32 \\ 154 \\ \times 26 \\ \hline 924 \end{array}$$

Write 9 in the answer section.

5 Cross out any previous regroupings.

In the next section, multiply the ones in the three-digit number by the tens in the two-digit number

$$\begin{array}{r}
 \cancel{3} \cancel{2} \\
 154 \\
 \times \quad 26 \\
 \hline
 924 \\
 80
 \end{array}$$

Because the calculation involves multiplying by 20, a zero needs to be placed in the right-hand column as a place holder.

$4 \text{ ones} \times 2 \text{ tens} = 8 \text{ tens}$

Write 8 in the answer section.

6 Multiply the tens in the three-digit number by the tens in the two-digit number and add any regrouped hundreds.

$$\begin{array}{r}
 1 \cancel{3} \cancel{2} \\
 154 \\
 \times \quad 26 \\
 \hline
 924 \\
 080
 \end{array}$$

$5 \text{ tens} \times 2 \text{ tens} = 1 \text{ thousand}$

Write 0 in the answer section and regroup the 1 thousands by writing a 1 above the thousands column.

7 Multiply the hundreds in the three-digit number by the tens in the two-digit number and add any regrouped thousands.

$$\begin{array}{r}
 1 \cancel{3} \cancel{2} \\
 154 \\
 \times \quad 26 \\
 \hline
 924 \\
 3080
 \end{array}$$

$1 \text{ hundred} \times 2 \text{ tens} = 2 \text{ thousands} + 1 \text{ thousand} = 3 \text{ thousands}$

Write 3 in the answer section.

8 Combine the totals using regrouping if required.

$$\begin{array}{r}
 1 \cancel{3} \cancel{2} \\
 154 \\
 \times \quad 26 \\
 \hline
 924 \\
 3080 \\
 4004 \\
 \hline
 11
 \end{array}$$

9 $154 \times 26 = 4004$