

Worked example

The worked example below incorporates the following success criteria of an effective worked example:

- 1. Break complex material into smaller steps.
- 2. Ensure that each step removes any extraneous information and offers a clear structure and reasoning.
- 3. Think aloud your expert reasoning in order to share this with the pupil

KS2: Introduction to long multiplication – expanded method

Step	Think aloud	Worked example
First multiply each unit by 6.	In order to solve this, I am going to partition 36 and start by multiplying each digit in 235 by 6. I am setting this out carefully so that each of my digits is in the correct column. Writing my calculation down at the side helps me to know what I have multiplied.	235 x 36 30 (5x6) 180 (30x6) 1200 (200xb)
2. Then multiply each digit by 30.	Now that I have multiplied everything by 6, I am going to cross it out so I can remind myself that I have already multiplied by 6. I am now going to multiply each digit by 30. I am still making sure that each of my digits is written in the correct column.	$ \begin{array}{c cccc} 2 & 3 & 5 \\ x & 3 & 6 \\ \hline 3 & 0 & (5 \times 6) \\ 1 & 3 & 0 & (30 \times 6) \\ \hline 1 & 2 & 0 & 0 & (200 \times 6) \\ \hline 1 & 5 & 0 & (5 \times 30) \\ 9 & 0 & 0 & (30 \times 30) \\ 6 & 0 & 0 & 0 & (200 \times 30) \end{array} $
3. Finally add all the numbers together to get the total to 235 x 36	Finally, I am going to add all the numbers together to get the total for the sum 235 x 36. Once I have found the total I am going to put the comma in the correct place in between the thousandths and hundredths digit.	2 3 5 x 3.6 3 0 (5x6) 1 8 0 (30x6) 1 2 0 0 (200x6) 1 5 0 (5x30) 9 0 0 (30x30) 6 0 0 0 (200x30) 8,460