

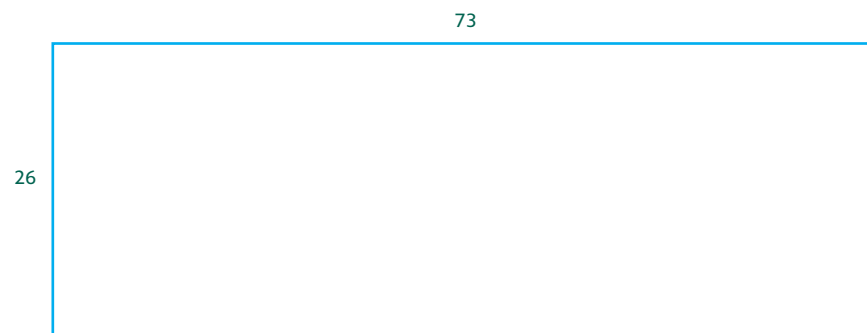
Grid method

The structured apparatus used in earlier work is not useful when demonstrating long multiplication. However, a visual approach, based on calculating the areas of rectangles, can be used. This is called the 'Grid method'. The prerequisites of this informal written method are:

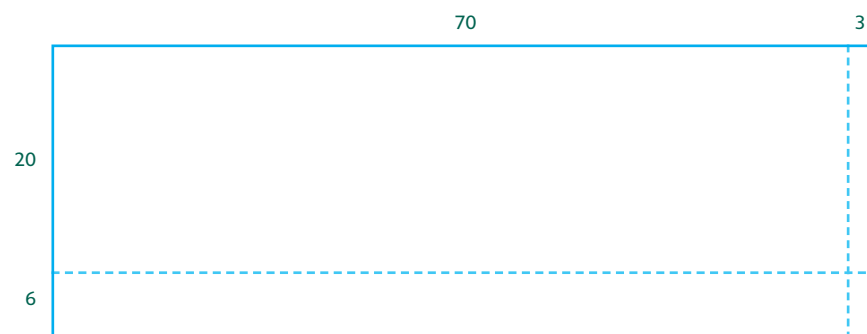
- pupils know that the area of a rectangle can be found by multiplying its length by its breadth
- pupils know how to multiply a number by 10, 100 and 1000.

For example, consider 73×26 .

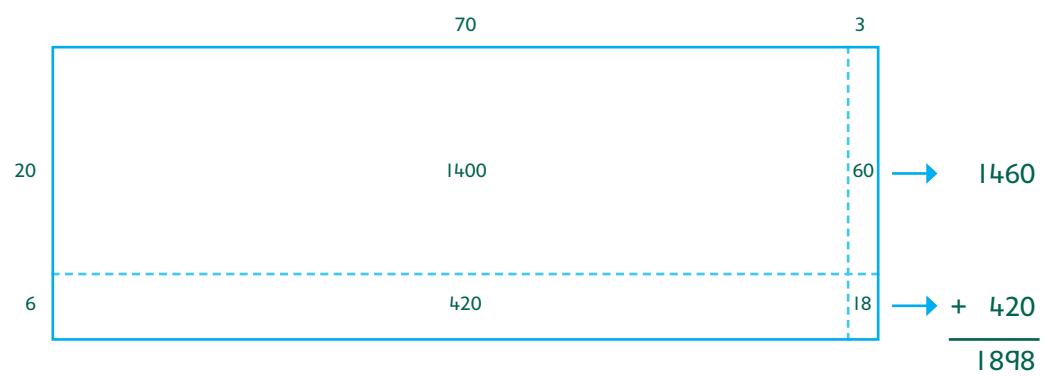
- Think of a rectangle which is 73 metres long and 26 metres wide.



- Split the rectangle into smaller rectangles using the tens and units of 73 and 26.



- Find the areas of the smaller rectangles and enter them on the diagram.
- Add the areas together as shown to find the total area.



So, $73 \times 26 = 1898$.

Notice that the subtotals 1460 and 438 are the same as those found in the formal written method of long multiplication.

This grid method is not as efficient as long multiplication. Its disadvantages compared with long multiplication are the time-consuming drawing of the grid and the greater scope for errors in the working.