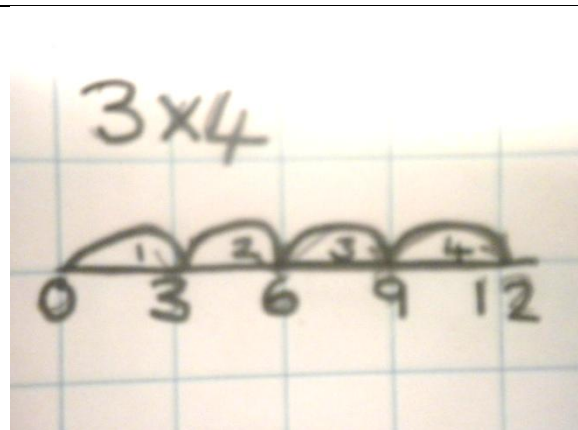


### Multiplication on a numberline

- Draw a numberline
- Write zero at the start
- Jump in multiples of 3 for 4 jumps
- The answer is the number you land on.

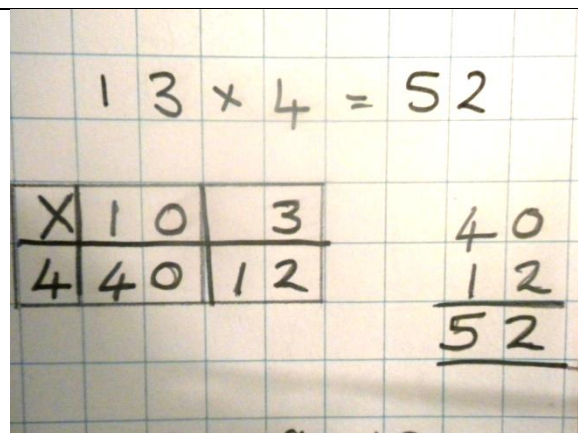
\*Usually taught in Year 1 and Year 2



### Grid Method (2 digit number by 1 digit number)

- Draw a grid with 2 columns and 1 row
- Partition the 2 digit number into the columns and write the 1 digit number at the side
- Multiply the tens section ( $10 \times 4$ )
- Multiply the units section ( $4 \times 3$ )
- Add your answers together

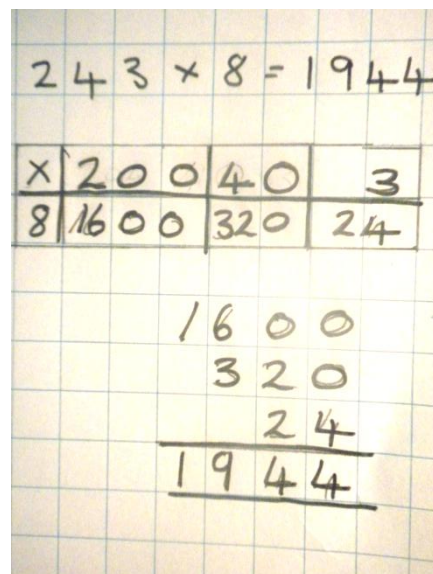
\*Usually taught in Year 3



### Grid Method (3 digit number by 1 digit number)

- See method above - you now need 3 columns and 1 row

\*Usually taught in Year 4



### Expanded Method

- Write the calculation in columns
- Multiply the units (writing the calculation next to the answer) on the top row (e.g  $6 \times 4$ )
- Multiply the tens and write it on the next row down (e.g  $30 \times 4$ )
- Multiply the hundreds and write it below the tens (e.g  $100 \times 4$ )
- Add together your three answers

**NB: This can be used for multiplying a 2 digit number by a 1 digit number**

**\*Usually taught in Year 3 with two digits by one digit and Year 4 for three digits by one digit.**

Handwritten calculation on grid paper showing the expanded method for  $136 \times 4$ . The columns are labeled H, T, U. The calculation is shown as follows:

$$\begin{array}{r} \text{H T U} \\ 136 \\ \times 4 \\ \hline 24 \\ 120 \\ 400 \\ \hline 544 \end{array}$$

Next to the calculations, the individual multiplications are written out:  $4 \times 6$ ,  $4 \times 30$ , and  $4 \times 100$ .

### Formal Method

- Write the calculation in columns
- Multiply the top number by the units of the bottom number.
- NB: You need to multiply  $6 \times 4$  to get 24, then write the 4 in the units column and carry the 2 into the tens column. Now multiply  $6 \times 2$  (the tens digit in the top number) to get 12 and add on the 2 you carried to get the answer 144
- Multiply the top number by the tens of the bottom number.
- NB: First you need to write a zero in the units column (because we are multiplying by 10), then multiply by the tens digit of the bottom number, so  $1 \times 4 = 4$  and  $1 \times 2 = 2$  to get the answer 240
- Add together the two answers to get 384

**\*Usually taught from Year 4 upwards**

Handwritten calculation on grid paper showing the formal method for  $136 \times 4$ . The columns are labeled T, U. The calculation is shown as follows:

$$\begin{array}{r} \text{T U} \\ 136 \\ \times 4 \\ \hline 144 \\ 240 \\ \hline 384 \end{array}$$