

Helping your child with Maths: MULTIPLICATION



Stage 3: Partitioning (Grid Method)

123×5	500	123×54	<u>Totals</u>
$+ 100$	$+ 100$	$\times \begin{array}{ c c c } \hline 100 & 20 & 3 \\ \hline \end{array}$	<u>6150</u>
$+ 15$	$+ 15$	$50 \begin{array}{ c c c } \hline 5000 & 1000 & 150 \\ \hline \end{array}$	<u>492</u>
<u>615</u>	<u>615</u>	$4 \begin{array}{ c c c } \hline 400 & 80 & 12 \\ \hline \end{array}$	<u>6642</u>

Children will use their knowledge of partitioning to help them multiply larger numbers. The numbers in the calculation will be partitioned then multiplied separately before adding the answers together.

Stage 4: Column Method

To ensure the decimal place is correct: add the amount of decimal places in the question numbers, i.e. 3.41 has 2 decimal places and 5.2 has 1 decimal place so the answer has 3 decimal places.

$$123 \times 5$$

1st Step	2nd Step	3rd Step
$\begin{array}{r} 123 \\ \times 5 \\ \hline 5 \\ \hline 1 \end{array}$	$\begin{array}{r} 123 \\ \times 5 \\ \hline 15 \\ \hline 11 \end{array}$	$\begin{array}{r} 123 \\ \times 5 \\ \hline 615 \\ \hline 11 \end{array}$

$\begin{array}{r} 341 \\ \times 52 \\ \hline 682 \\ + 17050 \\ \hline 17732 \end{array}$	$\begin{array}{r} 3.41 \\ \times 5.2 \\ \hline 682 \\ + 17050 \\ \hline 17.732 \end{array}$
--	---

Children now move on to using the column layout for their multiplication calculations. They no longer partition the numbers. They use their prior knowledge of partitioning and place value to multiply the digits within the calculation. Children should estimate their answer first to be able to check their work, e.g. 122×6 can be rounded to $120 \times 6 = 720$. Therefore, the children know their answer should be close to 720.