

## Multiplication

### Short Multiplication

E.g. $24 \times 6$ $\begin{array}{r} 24 \\ \times 6 \\ \hline 144 \\ \hline 2 \end{array}$	E.g. $342 \times 7$ $\begin{array}{r} 342 \\ \times 7 \\ \hline 2394 \\ \hline 21 \end{array}$	E.g. $2741 \times 6$ $\begin{array}{r} 2741 \\ \times 6 \\ \hline 16446 \\ \hline 42 \end{array}$
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### Long Multiplication

Pupils are taught the column method for multiplication in primary school, which is common across all of our feeder primary schools. If they have a secure conceptual understanding of this method, then teachers should continue to use this method from Year 7 onwards.

#### - Column Method

E.g. $24 \times 16$ $\begin{array}{r} 24 \\ \times 16 \\ \hline 240 \\ 144 \\ \hline 384 \end{array}$	E.g. $124 \times 26$ $\begin{array}{r} 124 \\ \times 26 \\ \hline 2480 \\ 744 \\ \hline 3224 \\ \hline 11 \end{array}$
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Video: <https://youtu.be/wayoClgl08I> (Column method multiplication)

For multiplication, some pupils may include an addition symbol when adding partial products.

They will be taught the grid method for multiplication if they do not have a secure understanding of the column method following primary school. This deepens their conceptual understanding and minimises opportunities for minor errors.

#### - Grid Method

E.g. $23 \times 8$ $\begin{array}{r} 20 \quad 3 \\ \times 8 \\ \hline 160 \quad 24 \\ \hline 160 \\ + 24 \\ \hline 184 \end{array}$	E.g. $346 \times 9$ $\begin{array}{r} 300 \quad 40 \quad 6 \\ \times 9 \\ \hline 2700 \quad 360 \quad 54 \\ \hline 2700 \\ + 360 \\ + 54 \\ \hline 3114 \end{array}$	E.g. $72 \times 38$ $\begin{array}{r} 70 \quad 2 \\ \times 30 \quad 8 \\ \hline 2100 \quad 60 \\ 560 \quad 16 \\ \hline 2100 \\ + 560 \\ + 60 \\ + 16 \\ \hline 2736 \\ \hline 1 \end{array}$
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Video: <https://youtu.be/4PcsEtIqei8> (Grid method multiplication)

The expectation would be for all staff to teach multiplication using either the column method or the grid method but only allow students to use the column method if they have a firm conceptual understanding of this method.