

# Multiplication

**FOR PARENTS:** Below is a guide to the teaching of multiplication. Most children in Year 6 are able to use short multiplication and long multiplication. We have included the teaching methods for Year 4 and 5 should you find you need to go back a step to aid understanding.

**Year 4** Multiply 2 and 3-digits by a single digit, using all multiplication tables up to  $12 \times 12$

Developing the grid method

Eg.  $136 \times 5 = 680$

X	100	30	6
5	500	150	30

$$\begin{array}{r} 500 \\ 150 \\ + 30 \\ \hline 680 \end{array}$$

**Year 5** Multiply up to 4-digits by 1 or 2 digits.

Introducing column multiplication

x	300	20	7
4	1200	80	28



$$\begin{array}{r} 327 \\ \times \quad 4 \\ \hline 1308 \\ \phantom{1}1 \phantom{2} \end{array}$$

Introduce long multiplication

	10	8
10	100	80
3	30	24



$$\begin{array}{r} 18 \\ \times 13 \\ \hline 54 \\ 20 \\ \hline 234 \end{array}$$

# Multiplication

## Year 5 Advice for staff

### Short multiplication for multiplying by a single digit

Introduce by comparing a grid method calculation to a short multiplication method to see how the steps are related, but notice how there are fewer steps involved in the column method

x	300	20	7
4	1200	80	28



	3	2	7
x			4
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1	3	0	8
	1	2	

Pupils could be asked to work out a given calculation using the grid, and then compare it to your column method. What are the similarities and differences? Unpick the steps and show how it reduces the steps.

### Introduce long multiplication for multiplying by 2 digits

	10	8
10	100	80
3	30	24



		1	8
	x	1	3
		5	4
		2	
	1	8	0
	2	3	4

$18 \times 3$  on the first row ( $8 \times 3 = 24$ , carrying the 2 for twenty, then  $1 \times 3$ ).  $18 \times 10$  on the 2nd row. Put a zero in units first, then  $8 \times 1$  &  $1 \times 1$ .

The grid could be used to introduce long multiplication, as the relationship can be seen in the answers in each row.

### Moving towards more complex numbers

	1	2	3	4
x			1	6
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	7	4	0	4
	1	2	3	4
	0			
	1	9	7	4

(1234  $\times$  6)  
(1234  $\times$  10)

	3	6	5	2
x				8
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2	9	2	1	6
	5	4		

# Multiplication

**Year 6** Short and long multiplication as in Y5, and multiply decimals with up to 2 d.p. by a single digit.

	3	.	1	9
x	8			
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2	5	.	5	2
	1		7	

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