National Curriculum Programme of Study;

- multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- multiply one-digit numbers with up to 2 decimal places by whole numbers

Y6
Multiplication

BY THE END OF YEAR 6…

By the end of Year 6, children will be able to show their understanding as;

```
    4 2 7 6
x       3 4
-----------
  1 7 1 0 4
    1 3 2
1 2 8 2 8 0
    2 1
-----------
1 4 5 3 8 4
  1
```

Following on from Year 5…
Column method for long multiplication

```
    1 4 2
x     3 1
---------
    1 4 2
4 2 6 0
---------
1
```

The introductory teaching of long multiplication, based on solid conceptual understanding of short multiplication, is developed in Years 4 and 5.

Children in Year 6 should be consolidating their understanding with the multiplication of increasingly large numbers, set in context wherever possible.

Column method for long multiplication, involving decimals

The multiplication of decimal numbers was introduced in year 5, with single digit numbers with up to 2 decimal places being multiplied by a single digit whole number.
(See Year 5 for accompanying notes)

```
    3 . 2 5
x         6
-----------
    . 3 0
  1 . 2 0
1 8 . 0 0
-----------
1 9 . 5 0
-----------
```

```
    3 . 2 5
x         6
-----------
1 9 . 5 0
-----------
  1 1   3
```

		2	.	7	4
x				1	4
			.	1	6
		2	.	8	0
		8	.	0	0
			.	4	0
		7	.	0	0
	2	0	.	0	0
	3	8	.	3	6
	1	1			

The expanded stage should be shown again, alongside the compact format when introducing the children to the multiplication of a decimal number by a **two-digit number**.
E.g. £2.74 x 14

It may be useful for children to annotate at the side of each line, which part of the calculation it refers to, e.g. (4 x 4p) or (10 x 70p)