

## Multiplication: Violet (Y6)

### Mental Work

Derive and recall

- squares to  $12 \times 12$
- squares of the corresponding multiples of 10
- prime numbers less than 100

Work mentally (with jottings if needed)

- multiply pairs of 2-digit and 1-digit numbers, e.g.  $28 \times 3$
- double decimals with units (ones) and tenths, e.g. double 7.6
- multiply pairs of multiples of 10 and 100, e.g.  $50 \times 30$ ,  $600 \times 20$
- multiply 2-digit decimals such as  $0.8 \times 7$
- scale up (and down) using known facts, e.g. given that 3 oranges cost 24p, find the cost of 4 oranges ( $24 \div 3 = 8$ ,  $8 \times 4 = 32$ )
- identify numbers with odd and even numbers of factors and no factor pairs other than 1 and themselves (use knowledge of  $\times$  and  $\div$  facts)

Children should be encouraged to:

\* **approximate** their answers before calculating

\***consider if a mental calculation** would be appropriate **before** using written methods

\***check their answers** after calculation using an appropriate strategy

### Recording

See previous examples

Using short and long multiplication, they will be able to use **decimal numbers**

- multiply decimals with up to two decimal places by a single digit number (e.g.  $U.th \times U$  and  $TU.th \times U$ )
- then multiply decimals with up to two decimal places by a two digit number ( $U.th \times TU$  and  $TU.th \times TU$ )
- they should always **approximate first**, and know that the **decimal points line up** under each other