

Long Multiplication

4th Grade

Two-digit by two-digit, laid out so nothing gets lost.

You are doing two multiplications and adding them. The layout keeps track of which is which.

MULTIPLY BY THE ONES

1

Take the ones digit of the bottom number times the whole top number.

WRITE A PLACEHOLDER ZERO

2

On the next line, put a 0 in the ones column. Do this before anything else.

MULTIPLY BY THE TENS

3

Now the tens digit times the whole top number, starting from that zero.

ADD THE TWO LINES

4

Column addition, carrying as normal.

WORKED: 34×26

$$34 \times 6 = 204$$

$$34 \times 20 = 680 \text{ (the 0 first, then } 34 \times 2)$$

$$204 + 680 = 884$$

The zero is not decoration. It is there because you are multiplying by 20, not by 2.