

Multiplying two two-digit numbers

MODULE 2 · OPERATIONS AND COMPUTATIONAL FLUENCY NUMBER

23 × 14 (USING THE AREA MODEL)

	× 20	× 3
10	200	30
4	80	12

Total: 200 + 30 +

- Split each number: $23 = 20 + 3$, $14 = 10 + 4$.
- Multiply each combination: 20×10 , 20×4 , 3×10 , 3×4 .
- Add all four partial products: $200 + 80 + 30 + 12 = 322$.

TRY IT ON THE LINE

Partition each two-digit factor into tens + ones. The area model gives FOUR rectangles — one per pair of parts. Total them at the end.

- Compute 23×17 (matches the diagram): $20 \times 10 + 20 \times 7 + 3 \times 10 + 3 \times 7 = \underline{\hspace{2cm}}$
- Compute 42×26 .
- Compute 58×35 .

PRACTICE

- Aoife brings **25.9 g** of oats to the pond each Saturday to feed the ducks. Over **9** Saturdays in a row, how many grams of oats has she brought in total?
- Mr Ó Briain wants to arrange **38** chairs in the school hall into equal rows for the 5th class assembly. He needs to know every possible row size that divides **38** exactly. List every factor of **38** in order from smallest to largest.

CHALLENGE

- 5th class are making paper bunting flags to decorate the classroom for World Book Day. Each of the **9** strings of bunting has **3386 mm** of ribbon along the top. What is the total length of ribbon needed for all **9** strings?
- On the school nature walk through the local park, 5th class count **3427** steps along one loop of the trail. The teacher tells them they will walk the same loop **7** times across the term. How many steps will they take in total?