

Lesson 23 **NUMBER**

Multiplying a 2-digit number by 1 digit – partition and the grid method

WHAT THIS LESSON TEACHES

To multiply a two-digit number by one digit, split the two-digit number into its tens and units, multiply each part on its own, then add the two partial products.

→ $23 = 20 + 3$

→ 23×4 : $20 \times 4 = 80$ and $3 \times 4 = 12$, then $80 + 12 = 92$

MODEL THIS ON THE BOARD

GRID METHOD 34×6

- 1 Split 34 into tens and units: $30 + 4$.
- 2 Tens box: $30 \times 6 = 180$.
- 3 Units box: $4 \times 6 = 24$.
- 4 Add the parts: $180 + 24 = 204$.

	$\times 30$	$\times 4$
6	180	24

Total: $180 + 24 = 204$

DISCUSSION STARTER

REFLECT Did the grid make the parts of the product clearer for you?

ANSWER KEY

a) 78

b) 180

c) 310

Q1: 477 tins

Q2: 136 apples

Q3: 84

Q4: 170

Q5: 282

a) **Always** — The two boxes always add back up to the whole rectangle.

b) **Sometimes** — It depends on the digits, for example 19×5 has a small tens part but usually tens win.

c) **Always** — Tens plus units always rebuild the whole two-digit number.

d) **Never** — The units digit of a two-digit number is at least 1, so the units box is never zero.

EXTENSION SHEET · STRETCH ANSWERS

S1: 1930

S2: 6216

S3: 2816

S4: 2241

S5: 3552

Investigation: Grid-method challenge — open-ended; scan pupils' working for valid solution paths rather than a single answer.