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2-Digit Multiplication with the Box Method

How can 23×46 fit into four boxes?

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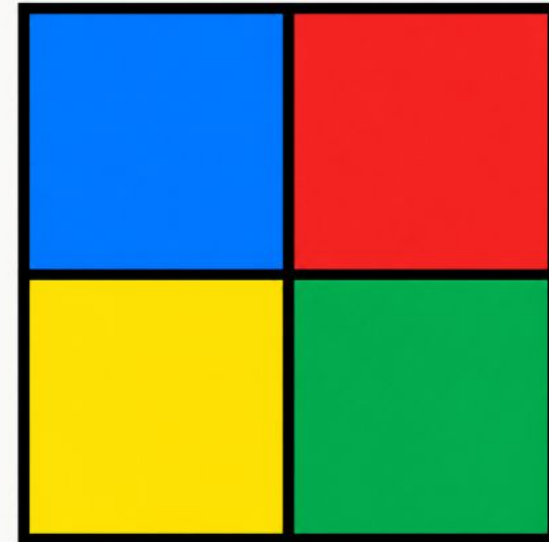
24

We break big numbers into tens and ones

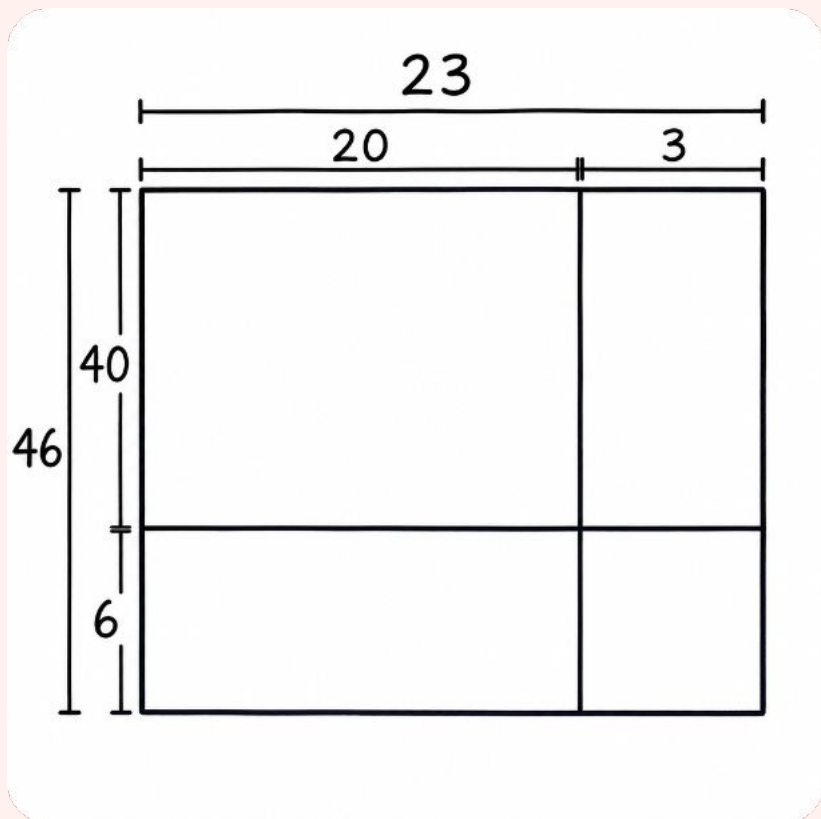
- $23 = 20 + 3$
- $46 = 40 + 6$
- Tens show groups of ten.
- Ones show leftover units.

A box has four parts for four smaller problems

- Box method: split factors
- Expanded form: tens and ones
- Partial products: smaller answers



First, draw a box and split both numbers



- Draw one large box
- Split 23: $20 + 3$
- Split 46: $40 + 6$

Second, multiply each pair of parts

1. $20 \times 40 = 800$

2. $20 \times 6 = 120$

3. $3 \times 40 = 120$

4. $3 \times 6 = 18$

Third, add all four partial products together

- $2,000 + 800 + 120 + 18 = 2,938$
- So, $23 \times 46 = 2,938$

Let's try one together: 34×27

Use the three steps.

What four partial products do we find? Then add them.

Now you try: 45×18

Solve independently using the box method.

Show your four partial products and final answer.

Put the steps in order

First draw. Second split. Third multiply. Next add.

Which step comes first? Explain why the order matters.

**23×46 becomes four smaller
products to add**