



# Standard Algorithm: Multi-digit Numbers, with Composing

Let's multiply with the standard algorithm and compose new units.

## Warm-up

### Number Talk: Three Factors

Find the value of each product mentally.

- $(2 \times 3) \times 10$
- $(2 \times 40) \times 10$
- $(2 \times 200) \times 10$
- $(2 \times 243) \times 10$

## Activity 1

### Compose a New Unit

1. Find the value of  $241 \times 23$ .

2. Lin uses the standard algorithm to find the value of  $241 \times 23$ .

$$\begin{array}{r} & & 1 \\ & 2 & 4 & 1 \\ \times & & 2 & 3 \\ \hline & 1 & & \\ & 7 & 2 & 3 \\ + & 4 & 8 & 2 & 0 \\ \hline & 5 & 5 & 4 & 3 \end{array}$$

- Where do you see  $241 \times 3$  in Lin's work?

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- Where do you see  $241 \times 20$  in Lin's work?

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- What does the 1 above 241 represent in Lin's calculation?

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3. Use the standard algorithm to find the value of  $182 \times 41$ .

4. Use the standard algorithm to find the value of  $304 \times 23$ .

## Activity 2

### All the Products

Find the value of each product, using the standard algorithm.

$647 \times 9$

$647 \times 50$

$647 \times 59$

$264 \times 38$