Unit 4, Lesson 4

Standard Algorithm: One-digit and Multi-digit Numbers, with Composing

Let's use the standard algorithm to multiply multi-digit numbers by one-digit numbers.

Warm-up

Number Talk: Partial Product

Find the value of each product mentally.

- 3×3
- 3×20
- 3×600
- 3×623

Activity 1

Compose with the Standard Algorithm

Han calculates 318×3, using partial products.

$$\begin{array}{r} 3\ 1\ 8 \\ \times \quad\ 3 \\ \hline 2\ 4 \\ 3\ 0 \\ +\ 9\ 0\ 0 \\ \hline 9\ 5\ 4 \end{array}$$

Elena calculates 318×3, using the **standard algorithm**.

$$\begin{array}{r} \ \ 2 \\ 3\ 1\ 8 \\ \times \quad\ 3 \\ \hline 9\ 5\ 4 \end{array}$$

1. What does the 2 in Elena's calculation represent? Explain or show your reasoning.

2. What does the 5 in Elena's solution represent? Explain or show your reasoning.

Activity 2

Use the Standard Algorithm

Calculate each product, using Elena's strategy.

1. $3{,}615 \times 4$

2. $16{,}023 \times 3$

3. $27{,}326 \times 3$

4. $10{,}215 \times 6$