Lesson 6: 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.

- $(2 \times 3) \times 10$

- $(2 \times 40) \times 10$

- $(2 \times 200) \times 10$

- $(2 \times 243) \times 10$

6.1: Compose a New Unit

1. Find the value of 241×23 .

2. Lin used the standard algorithm to find the value of 241×23. Here is her work:

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

a. Where do you see 241×3 in Lin's work?

b. Where do you see 241×20 in Lin's work?

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

3. Use the standard algorithm to find the value of 182×41.

4. Use the standard algorithm to find the value of 304×23.

6.2: All the Products

Find the value of each product using the standard algorithm.

1. 647×9

2. 647×50

3. 647×59

4. 264×38