Unit 9, Lesson 4

Another Look at the Standard Algorithm

Let's subtract from numbers with zeros.

Warm-up

Number Talk: Differences

Find the value of each difference mentally.

- $87 - 24$

- $387 - 124$

- $6{,}387 - 129$

- $6{,}387 - 4{,}329$

Activity 1

A Lot of Zeros

1. Find the value of each difference.

a.

$$\begin{array}{r} 700 \\ -\ \ 16 \\ \hline \end{array}$$

b.

$$\begin{array}{r} 7,000 \\ -\ \ 16 \\ \hline \end{array}$$

c.

$$\begin{array}{r} 70,000 \\ -\ \ 16 \\ \hline \end{array}$$

d.

$$\begin{array}{r} 700,000 \\ -\ \ 16 \\ \hline \end{array}$$

2. Find the number that makes each expression true.

a.

$$\begin{array}{r} \square\square 43 \\ +\ \square\square\square \\ \hline 200 \end{array}$$

b.

$$\begin{array}{r} \square\square 43 \\ +\ \square\square\square \\ \hline 2,000 \end{array}$$

c.

$$\begin{array}{r} \square\square 43 \\ +\ \square\square\square \\ \hline 20,000 \end{array}$$

d.

$$\begin{array}{r} \square\square 43 \\ +\ \square\square\square \\ \hline 200,000 \end{array}$$

Activity 2

Ways of Finding Differences

Priya and Han find the value of $20{,}000 - 472$. They use 2 different methods to set up their calculations.

Priya

$$\begin{array}{r} 20{,}000 \\ -\quad\ 472 \\ \hline \end{array}$$

Han

$$\begin{array}{r} \quad\ 472 \\ +\quad\quad\ \\ \hline 20{,}000 \end{array}$$

1. Use both methods to find the difference of 20,000 and 472.
2. Kiran uses another method. Explain how Kiran finds the value of $20{,}000 - 472$.

$$472 + 8 = 480$$
$$480 + 20 = 500$$
$$500 + 500 = 1{,}000$$
$$1{,}000 + 19{,}000 = 20{,}000$$

$$19{,}000 + 500 + 20 + 8 = 19{,}528$$

3. Which method do you prefer? Or do you prefer another way? Explain your reasoning.

4. Find the value of $50{,}400 - 1{,}389$. Show your reasoning.