Unit 4, Lesson 21

Zeros in the Standard Algorithm

Let's subtract from numbers with several zeros.

Warm-up

Which Three Go Together: Numbers with 0, 2, and 5

Which 3 go together?

A. 2,050

B. 2,055

C. 205.2

D. 20,005

Activity 1

What If There Is Nothing to Decompose?

Here are some numbers you saw earlier. Each number has at least one 0. From each number, 1,436 is being subtracted.

1. Make sense of the problems and explain to a partner.

a

$$\begin{array}{r} {\scriptstyle 1\ 10\ 4\ 10} \\ 2,\cancel{0}\ \cancel{5}\ \cancel{0} \\ -\ 1,436 \\ \hline 614 \end{array}$$

b

$$\begin{array}{r} {\scriptstyle 1\ 10\ 4\ 15} \\ 2,\cancel{0}\ \cancel{5}\ \cancel{5} \\ -\ 1,436 \\ \hline 619 \end{array}$$

2. Use the approach in the first problem to find these 2 differences:

a

$$\begin{array}{r} 2,005 \\ -\ 1,436 \\ \hline \end{array}$$

b

$$\begin{array}{r} 20,005 \\ -\ 1,436 \\ \hline \end{array}$$

3. Find the value of each difference. If you get stuck, try subtracting using the expanded form.

a

$$\begin{array}{r} 8,030 \\ -\ 2,615 \\ \hline \end{array}$$

b

$$\begin{array}{r} 8,033 \\ -\ 2,615 \\ \hline \end{array}$$

c

$$\begin{array}{r} 8,003 \\ -\ 2,615 \\ \hline \end{array}$$

d

$$\begin{array}{r} 80,003 \\ -\ 2,615 \\ \hline \end{array}$$

Activity 2

What Is Your Age?

Jada records the birth year of some of her maternal grandparents for a family history project.

family member	birth year
grandmother	1952
grandfather	1948
great-grandmother	1930
great-grandfather	1926

As of this year, what is the age of each family member? Explain or show your reasoning. Use the standard algorithm at least once.