

Lesson 21: Zeros in the Standard Algorithm

Standards Alignments

Addressing 4.NBT.A.2, 4.NBT.B.4

Teacher-facing Learning Goals

- Use the standard algorithm to subtract in the ten-thousands when the minuend has several zeros.

Student-facing Learning Goals

- Let's subtract from numbers with several zeros.

Lesson Purpose

The purpose of this lesson is to use the standard algorithm when the minuend has several zeros.

These problems can be challenging for students because they require special attention to make sense of how the multiple regroupings work and how they are recorded in the standard algorithm.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Which One Doesn't Belong? (Warm-up)

Materials to Gather

- Grid paper: Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	20 min
Activity 2	15 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

Which parts of this lesson gave you insight into how students are subtracting across zero? What insights did you gain?

Cool-down (to be completed at the end of the lesson)

🕒 5 min

Finding Differences

Standards Alignments

Addressing 4.NBT.B.4

Student-facing Task Statement

Use the standard algorithm to find each difference.

$$\begin{array}{r} 6,004 \\ - 842 \\ \hline \end{array}$$

$$\begin{array}{r} 9,090 \\ - 5,819 \\ \hline \end{array}$$

Student Responses

$$\begin{array}{r} 9 \\ 5 \cancel{10} \cancel{10} \\ 6, \cancel{0} \cancel{0} 4 \\ - 842 \\ \hline 5,162 \end{array}$$

$$\begin{array}{r} 9 \\ 8 \cancel{10} \cancel{8} \cancel{10} \cancel{10} \\ 9, \cancel{0} \cancel{9} \cancel{0} \cancel{0} \\ - 5,819 \\ \hline 8,5081 \end{array}$$