

Lesson 19: Division With and Without Remainders

Standards Alignments

Addressing 4.NBT.B.6, 4.OA.A.3, 4.OA.B.4

Teacher-facing Learning Goals

- Find whole-number quotients and remainders using an algorithm that uses partial quotients.

Student-facing Learning Goals

- Let's find quotients and remainders using an algorithm that uses partial quotients.

Lesson Purpose

The purpose of this lesson is for students to use an algorithm that uses partial quotients to find whole number quotients and remainders with up to four-digit dividends and one-digit divisors. Students also analyze some common errors when using an algorithm that uses partial quotients.

In this lesson, students deepen and apply what they learned about partial quotients to divide four-digit numbers by single-digit divisors. They also deepen their understanding of an algorithm that uses partial quotients—by noticing how the algorithm shows whether a division would result in a remainder, and by analyzing missteps that are commonly made in an algorithm like it.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR2 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	10 min
Activity 3	10 min

Teacher Reflection Question

Students have encountered many different ways to reason about division in the past few lessons. They might have other unique ways to think about division. Identify one or more ways in which your students' thinking offered a new insight or a positive surprise today.

Lesson Synthesis	10 min
------------------	--------

Cool-down	5 min
-----------	-------

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

 5 min

Find a Quotient

Standards Alignments

Addressing 4.NBT.B.6

Student-facing Task Statement

How many groups of 4 are in 1,865?

Use partial quotients to show your reasoning.

Student Responses

466 groups with a remainder of 1. Sample response:

$$\begin{array}{r}
 \boxed{466} \\
 6 \\
 60 \\
 400 \\
 4 \overline{)1,865} \\
 \underline{-1,600} \\
 265 \\
 \underline{-240} \\
 25 \\
 \underline{-24} \\
 1
 \end{array}$$