

Lesson 16: World's Record Noodle Soup

Standards Alignments

Addressing 5.NBT.B.6, 5.NF.B.3

Teacher-facing Learning Goals

- Solve problems that involve the division of multi-digit numbers.

Student-facing Learning Goals

- Let's solve a problem using division with large numbers.

Lesson Purpose

The purpose of this lesson is for students to estimate and solve multi-digit division with mixed number quotients.

In previous lessons, students use strategies based on place value, the properties of operations, and/or the relationship between multiplication and division to find whole-number quotients with up to four-digit dividends and two-digit divisors. In previous units, students interpreted fractions as division of the numerator by the denominator.

In this lesson, students explore a real world context and apply what they have learned about division to solve problems related to the context. The context is a world record event for making the longest noodle. The mathematically important part of the context is that the noodle cannot be pieced together from separate smaller noodles. Instead, it must be rolled out as one continuous noodle. It took the employees 17 hours to roll out the approximately 10,119 ft noodle and it fed 400 people. For more information about this event, follow the link: <https://www.guinnessworldrecords.com/news/commercial/2017/12/video-worlds-longest-noodle-is-more-than-3-km-long-502606>.

When students recognize mathematical features in the real world, they model with mathematics (MP4).

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

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

How did the student work that you selected impact the direction of the discussion? What student work might you pick next time if you taught the lesson again?

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

 5 min

Division Reflection

Standards Alignments

Addressing 5.NBT.B.6

Student-facing Task Statement

Describe something you really understand well from this section on dividing multi-digit numbers, or describe something that was confusing or challenging.

Student Responses

Sample response: I understand how to check my subtraction and multiplication while I am solving the problem. I like using a partial quotients algorithm because I can double check my work. I have to remember to estimate to check to make sure my answer makes sense. I get confused with all of the steps.