

Lesson 17: Fractions as Partial Quotients (Optional)

Standards Alignments

Building On 5.NF.B.3

Addressing 5.OA.A.2

Teacher-facing Learning Goals

- Make sense of partial quotients using fractions.

Student-facing Learning Goals

- Let's use fractions to help us divide whole numbers.

Lesson Purpose

The purpose of this lesson is for students to interpret sums of fractions as partial quotients.

Most of the quotients students have worked with in this unit have had whole number values. As seen in the previous lesson, sometimes the quotient has a remainder and fractions can be used to express the meaning of that remainder. The purpose of this optional lesson is to evaluate division expressions using fractions. Although the quotients students work with here are whole numbers, the fractions still highlight an important part of the partial quotients algorithm, namely that working with nice multiples of the divisor facilitates the calculation process. The new part of this lesson is that some of the multiples are fractions.

Access for:

Students with Disabilities

- Representation (Activity 2)

Instructional Routines

MLR1 Stronger and Clearer Each Time (Activity 2), What Do You Know About ____? (Warm-up)

Lesson Timeline

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

Teacher Reflection Question

What opportunities are you giving students to reflect on their understanding of the mathematical content?

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

🕒 5 min

Choose One Expression

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Student-facing Task StatementChoose one expression and use it to find the value of $154 \div 14$. Explain or show your thinking.

$154 \div 14 = \underline{\hspace{2cm}}$

- $\frac{140}{14} + \frac{14}{14}$
- $\frac{150}{14} + \frac{4}{14}$
- $\frac{70}{14} + \frac{70}{14} + \frac{14}{14}$

Student Responses11. Sample response: $\frac{140}{14} + \frac{14}{14} = 10 + 1$