Lesson 13: Situations Involving Equal-size Groups

Standards Alignments

Building On   3.OA.A.2, 3.OA.A.3
Addressing   4.NBT.B.6

Teacher-facing Learning Goals

- Reason about division of two- and three-digit numbers in situations involving equal-size groups.

Student-facing Learning Goals

- Let's interpret and solve division problems.

Lesson Purpose

The purpose of this lesson is for students to solve division problems in context, and to recall the two meanings of division: "how many in each group" and "how many groups."

In grade 3, students learned about the relationship between multiplication and division and reasoned about division in terms of equal groups. They also saw two interpretations of division: as a way to find the size of a group and as a way to find the number of groups. They used these understandings to find quotients and to reason about division problems in context, finding whole-number quotients from two-digit dividends and one-digit divisors.

In this lesson, students build from the skills and ideas learned in grade 3 as they recall strategies for reasoning about division problems in context (MP2). Students encounter situations that involve equal-size groups and that call for finding the size of a group and the number of groups. The work here prepares students to rely on the relationship between division and multiplication to solve problems involving three-digit dividends in the next lesson.

Access for:

⌖ Students with Disabilities

- Action and Expression (Activity 1)

🌐 English Learners

- MLR2 (Activity 2)

Instructional Routines

Estimation Exploration (Warm-up), MLR5 Co-craft Questions (Activity 1)

Lesson Timeline

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

Teacher Reflection Question

How readily did students see equal-size situations in terms of division (and see division expressions in terms of equal-size groups)? If they struggled to make a connection, what might be challenging?

Cool-down (to be completed at the end of the lesson)   🕐 5 min

After the Class Party

Standards Alignments

Addressing   4.NBT.B.6

Student-facing Task Statement

After the class party, 6 students offer to wash 96 pieces of utensils (spoons and forks). Each student is washing the same number of utensils.

How many pieces of utensils does each student wash? Explain or show your reasoning.

Student Responses

Each student washes 16 pieces. Sample responses:

- $6 \times 10 = 60$ and $6 \times 6 = 36$ so $6 \times 16 = 96$.
- $60 \div 6 = 10, 36 \div 6 = 6$, and $10 + 6 = 16$.