Lesson 21: Different Ways to Solve Problems

Standards Alignments

Addressing   4.NBT.B.5, 4.NBT.B.6, 4.OA.A.3

Teacher-facing Learning Goals

- Interpret products, quotients, and remainders in terms of a situation.
- Solve multi-step problems in ways that make sense to students.

Student-facing Learning Goals

- Let's reason about and solve multi-step problems.

Lesson Purpose

The purpose of this lesson is for students to represent and solve multi-step contextual problems involving multiplication and division, including division with remainders.

In this lesson, students analyze and use various strategies and representations to reason about multi-step problems. They use their knowledge of multiplication and division, including the ideas of factors and multiples, to represent situations. Students also interpret products, quotients, and remainders in context (MP2).

Access for:

♿ Students with Disabilities

- Representation (Activity 2)

🌐 English Learners

- MLR7 (Activity 1)

Instructional Routines

MLR5 Co-craft Questions (Activity 2), Which One Doesn't Belong? (Warm-up)

Materials to Copy

- Going on a Field Trip (groups of 1): Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	20 min

Teacher Reflection Question

In the first activity, students had to make sense of strategies, explanations, and representations that were not their own. What did students say

Activity 2	15 min
Lesson Synthesis	10 min
Cool-down	5 min

or do that showed the exercise was effective in expanding their view of problem solving?

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

Big Weekend at the Movies

Standards Alignments

Addressing   4.NBT.B.5, 4.NBT.B.6, 4.OA.A.3

Student-facing Task Statement

A one-room movie theater has 278 seats. Its goal is to sell 2,600 tickets every weekend. The theater plays a movie 5 times each Saturday and 4 times each Sunday.

Last weekend, the movie theater was completely full for every movie played on Saturday and Sunday. Did the movie theater meet its goal?

Student Responses

No, the goal was not met. Sample reasoning: A ticket was sold for each seat 5 times on Saturday, and 4 times on Sunday: $278 \times 5 = 1,390$ and $278 \times 4 = 1,112$, and $1,390 + 1,112 = 2,502$, The goal was not met because 2,502 is less than 2,600.