

Lesson 13: Multi-step Measurement Problems with Fractions

Standards Alignments

Building On 4.NF.B.4.b
Addressing 4.MD.A.2, 4.OA.A.3

Teacher-facing Learning Goals

- Solve multi-step problems that involve multiplicative comparison and measurement with whole numbers and fractions.

Student-facing Learning Goals

- Let's solve multi-step measurement problems.

Lesson Purpose

The purpose of this lesson is for students to solve multi-step problems that involve multiplicative comparison and measurement in whole numbers and fractions.

In earlier lessons, students learned about the relationship between pounds and ounces and solidified their understanding of how hours, minutes, and seconds are related. In this lesson, they apply these insights to solve multi-step problems, including multiplicative comparison problems. The last activity in the lesson is optional and is a complex puzzle involving pounds and ounces.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

MLR4 Information Gap (Activity 1, Activity 2), True or False (Warm-up)

Materials to Copy

- Info Gap: Noah's School Day (Part 2) (groups of 2): Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	20 min
Activity 3	20 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

As students shared their ideas today, how did you ensure all students' voices were heard and valued as an important part of the collective learning?

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

 5 min

Oatmeal Raisin Cookies

Standards Alignments

Addressing 4.MD.A.2, 4.OA.A.3

Student-facing Task Statement

Priya needs oats and raisins to make cookies. She needs 3 pounds of oats. That amount is 4 times as much as the amount of raisins that she needs.

How many ounces of raisins does she need? Explain or show your reasoning.

Student Responses

12 ounces. Sample reasoning: One pound is 16 ounces, and 3 pounds is 3×16 , which is 48 ounces, so she needs 48 ounces of oats. $48 \div 4 = 12$, so she has 12 ounces of raisins.