Lesson 18: Diagramas y ecuaciones para problemas en palabras

Standards Alignments

Addressing 3.OA.D.8
Building Towards 3.OA.D.8

Teacher-facing Learning Goals

- Relate diagrams and equations to two-step word problems.

Student-facing Learning Goals

- Conectemos diagramas y ecuaciones con situaciones.

Lesson Purpose

The purpose of this lesson is for students to relate diagrams and equations to two-step word problems.

In grade 2, students interpreted tape diagrams for one- and two-step problems involving addition and subtraction. Earlier this year, they did the same with one-step word problems involving multiplication. They also learned that a question mark, a blank line, or a box could be used to represent an unknown quantity in an equation.

In this lesson, students connect tape diagrams and equations with a symbol standing for the unknown quantity to two-step word problems. The work of this lesson prepares students to write equations with a letter standing for the unknown quantity and solve two-step problems, using a diagram if it helps them.

Access for:

♿ Students with Disabilities

- Engagement (Activity 1)

🌐 English Learners

- MLR8 (Activity 1)

Instructional Routines

Card Sort (Activity 1), Notice and Wonder (Warm-up)

Materials to Gather

- Sticky notes: Activity 2

Materials to Copy

- Card Sort: Situations, Equations, and

- Tools for creating a visual display: Activity 2   Diagrams, Spanish (groups of 4): 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

Students previously used tape diagrams to represent and solve one-step addition, subtraction, and multiplication problems. How are they leveraging that knowledge in this lesson on two-step problems?

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

¿Cuál ecuación corresponde?

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Student-facing Task Statement

Andre tenía 451 chaquiras. 125 chaquiras eran azules. 223 chaquiras eran rosadas. El resto de las chaquiras eran amarillas. ¿Cuántas chaquiras eran amarillas?

¿Cuál ecuación corresponde a la situación? Explica cómo razonaste.

A. $451 + 125 + 223 = ?$
B. $? + 125 + 223 = 451$
C. $? = 451 + 125 - 223$

Student Responses

B. Sample response: The 125 and 223 were just part of the total of 451, so the missing number should be one of the numbers that add up to 451.