

# Lesson 17: Use the Four Operations to Solve Problems

## Standards Alignments

Addressing 3.NBT.A.3, 3.OA.B.5, 3.OA.D.8

### Teacher-facing Learning Goals

- Represent two-step word problems using equations with a letter standing for the unknown quantity.
- Solve two-step word problems using the four operations.

### Student-facing Learning Goals

- Let's use the four operations to solve problems.

## Lesson Purpose

The purpose of this lesson is for students to solve two-step problems using all four operations.

Previously, students have solved two-step problems involving addition, subtraction, and multiplication. Here they consider what mathematical questions could be asked about a situation and then solve two-step problems that include division where the factors are limited to single-digit numbers. Parentheses are revisited as a tool students can use to specify which operation happens first in the equation so that it matches the situation they are representing.

This lesson has a Student Section Summary.

### Access for:

#### Students with Disabilities

- Engagement (Activity 2)

#### English Learners

- MLR5 (Activity 2)

## Instructional Routines

True or False (Warm-up)

### Materials to Gather

- Base-ten blocks: Activity 2

### Materials to Copy

- Centimeter Grid Paper - Standard (groups of 2): Activity 2

## 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 has your students' understanding of two-step word problems evolved from previous lessons? How have their experiences with multiplication and division in this unit influenced their problem solving strategies?

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

 5 min

### Andre's Balloons

#### Standards Alignments

Addressing 3.OA.D.8

#### Student-facing Task Statement

Andre has 125 balloons. He and 4 friends hung up some balloons for a party at school and now there are 80 balloons left. If each person hung up the same number of balloons, how many balloons did each person hang up?

1. Write an equation with a letter for the unknown quantity to represent the situation.
2. Solve the problem. Explain or show your reasoning.

#### Student Responses

1.  $(125 - 80) \div 5 = b$
2. 9 balloons. Sample response: I subtracted  $125 - 80$  to see how many balloons Andre and his friends hung up and got 45. Then, I divided 45 by 5 to see how many balloons each person hung up and got 9.