

# Lesson 22: Resolvamos problemas en los que hay números grandes

## Standards Alignments

Building On 4.NBT.A.1, 4.NBT.A.2

Addressing 4.NBT.B.4

## Teacher-facing Learning Goals

- Interpret and solve problems that involve finding sums and differences of multi-digit whole numbers.

## Student-facing Learning Goals

- Resolvamos problemas sumando y restando.

## Lesson Purpose

The purpose of this lesson is for students to solve problems that involve adding and subtracting multi-digit numbers.

In this lesson, students apply their skills and understandings for adding and subtracting large numbers to solve problems and participate in a game.

This lesson has a Student Section Summary.

## Access for:

### Students with Disabilities

- Action and Expression (Activity 2)

## Instructional Routines

MLR6 Three Reads (Activity 1), True or False (Warm-up)

## Materials to Gather

- Grid paper: Activity 1, Activity 2

## Materials to Copy

- 0-9 Digit Cards (groups of 2): Activity 2

## Lesson Timeline

Warm-up

10 min

## Teacher Reflection Question

What question do you wish you had asked

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

today? What kept you from asking the question?

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

 5 min

Poblaciones de tres ciudades

### Standards Alignments

Addressing 4.NBT.B.4

### Student-facing Task Statement

En el 2017, estas eran las poblaciones de las tres ciudades más grandes de Wisconsin.

ciudad	población
Milwaukee	595,351
Madison	255,214
Green Bay	105,116

1. ¿La población de las tres ciudades juntas era más de un millón de personas? Explica o muestra cómo razonaste.
2. ¿Cuántas personas en total había por encima de un millón o por debajo de un millón? Explica o muestra cómo razonaste.

### Student Responses

1. No. Sample response: Milwaukee had about 600,000 people. Madison had about 255,000 people. Green Bay had about 105,000 people. The sum of the three estimates is 960,000 people.
2. 44,319 people below one million. Sample response:
  - The sum of populations of Milwaukee and Madison is  $595,351 + 255,214$ , which is 850,565 people. Adding the population of Green Bay,  $850,565 + 105,116$ , gives 955,681

people. Subtracting 955,681 people from 1,000,000 people gives 44,319 people.

- The total population of the three cities is 955,681 people. I kept adding numbers to that total until reaching 1,000,000 people. I first added 40,000 people and then 4,000 people, which gives 999,681 people. Adding 319 people more gives 1,000,000 people. Then I added these numbers:  $40,000 + 4,000 + 319 = 44,319$ .
- Subtracting the population of Milwaukee from one million,  $1,000,000 - 595,351$ , gives 404,649 people. Subtracting the population of Madison from 404,649 people gives 149,435 people. Subtracting the population of Green Bay from 149,435 people gives 44,319 people.