

Eureka Math Tips for Parents

Grade 2 • Module 4

Addition and Subtraction Within 200 with Word Problems to 100

In this module, students will work on fluency in addition and subtraction up to 100. They will also build conceptual understanding of adding and subtracting multi-digit numbers to 200, and will apply their skills when solving problems.

Grade Level Standards

2.OA.1, 2.NBT.5 2.NBT.6, 2.NBT.72. NBT.8, 2.NBT.9

Student Report Card

Adds and subtracts in word problems and uses grouping strategies.

Adds and subtracts up to 1000 using place value understanding.

Key Vocabulary



- Minuend: A quantity or number from which another number is to be subtracted
- Subtrahend: A quantity or number being subtracted from another
- Difference: The solution to a subtraction problem
- Place value: Referring to the unit value of each digit in a given number
- Place Value Chart: A graphic organizer that students can use to see the coherence of place value and operations between different units.

How you can help at home:



- Continue to ask how many ones, tens, and hundreds are in numbers that you and your student come across
- When possible, encourage your student to explain their mathematical thinking by drawing a diagram or picture that links to their addition and subtraction problems
- Add all of the digits of your house number together.
- Compare prices of various items (gas, toys, etc) to find the lowest amount.
- Make numbers or find numbers on labels and compare them.
- Find or roll numbers and write them in expanded form.
- Find or roll numbers and tell which place value each digit represents.

Models and Representations

Ways to represent addition and subtraction:

Throughout the module, students are encouraged to be flexible in their thinking and to use multiple strategies in solving problems. These strategies are described below.

Number Bonds

Students continue to add and subtract using number bonds to compose or decompose numbers.

The Arrow Way

29+42

Students learn the arrow way to record their mental math and to show changes by multiples of ten and one.

$$29 \xrightarrow{440} 69 \xrightarrow{+2} 71$$

$$71-29$$

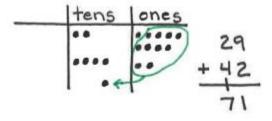
$$71 \xrightarrow{-10} 61 \xrightarrow{+3} 51 \xrightarrow{-10} 41 \xrightarrow{-10} 31 \xrightarrow{-2} 29$$

Tape Diagrams

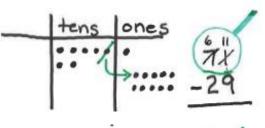
Tape diagrams are used to show students the ease of subtracting by a multiple of 10. In this example, adding 1 to each number makes a simpler problem to solve.

Place Value

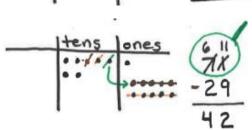
The understanding of vertical addition and subtraction starts with concrete work with number disks. This manipulative strengthens students' place value understanding and helps them model the standard addition algorithm. Students will move to a more abstract approach in which the disks are replaced with circles and dots. These drawings are slowly taken away, ending with students only using the abstract calculation.



When adding, students bundle groups of 10 and indicate carrying within the algorithm.



When subtracting, students are encouraged to "be a detective" and see if they need to do any unbundling before they can subtract. In this example, students see that they cannot take away 9 ones from 1 one, so they unbundle and record it in the algorithm on the side.



After students have been a detective and are ready to subtract, they show their work in the place value chart and record the solution in the algorithm. The place value chart is slowly removed, ending with students using only the subtraction algorithm.

