

Eureka Math Parent Guide

A GUIDE TO SUPPORT PARENTS AS THEY WORK WITH THEIR STUDENTS IN MATH.

**GRADE 2
MODULE 4**

GRADE FOCUS

Second Grade mathematics is about (1) extending students' understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

- Module 1: Sums and Differences to 20
- Module 2: Addition and Subtraction of Length Units
- Module 3: Place Value, Counting, and Comparison of Numbers to 1000
- » **Module 4: Addition and Subtraction Within 200 with Word Problems to 100**
- Module 5: Addition and Subtraction Within 1000 with Word Problems to 100
- Module 6: Foundations of Multiplication and Division
- Module 7: Problem Solving with Length, Money, and Data
- Module 8: Time, Shapes, and Fractions as Equal Parts of Shapes

LET'S CHECK IT OUT!

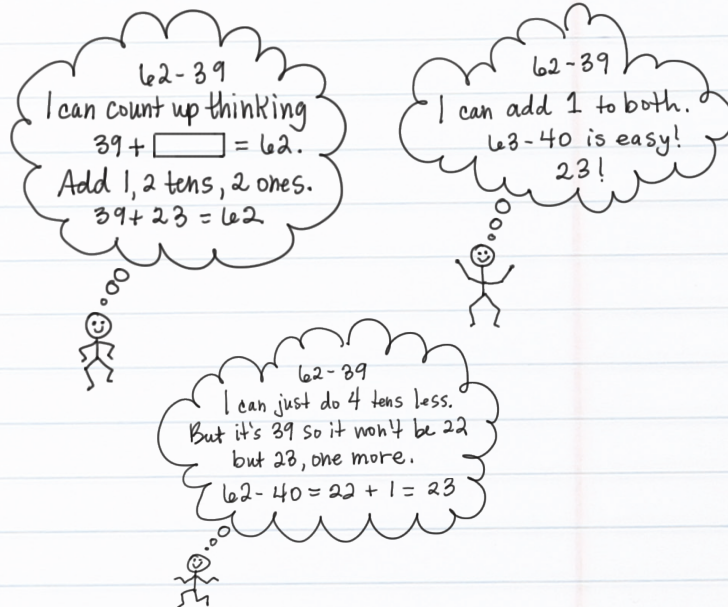
MODULE 4 FOCUS

In Module 4, is devoted to three major areas of work. The first two are building fluency in two-digit addition and subtraction within 100 and applying that fluency to one- and two-step word problems of varying types within 100. The third major area of work is developing students' conceptual understanding of addition and subtraction of multi-digit numbers within 200. Throughout the module, students are encouraged to be flexible in their thinking and to use multiple strategies in solving problems.

MORE SPECIFICALLY, CHILDREN WILL LEARN HOW TO:

- Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.
- Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Add up to four two-digit numbers using strategies based on place value and properties of addition and subtraction.
- Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of addition and subtraction, and/or the relationship between these operations. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones, and sometimes it is necessary to compose or decompose tens or hundreds.

- Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
- Explain why addition and subtraction strategies work, using place value and the properties of operations.



TOPIC OVERVIEW

Topics are the lessons within a module that help children master the skills above. Here are the lessons that will guide your child through Module 4:

- Topic A: Sums and Differences Within 100
- Topic B: Strategies for Composing a Ten
- Topic C: Strategies for Decomposing a Ten
- Topic D: Strategies for Composing Tens & Hundreds
- Topic E: Strategies for Decomposing Tens & Hundreds
- Topic F: Student Explanations of Written Methods

WORDS TO KNOW

- **Algorithm:** a step-by-step procedure to solve a particular type of problem
- **Compose:** e.g., to make 1 larger unit from 10 smaller units
- **Decompose:** e.g., to break 1 larger unit into 10 smaller units
- **Equation:** two expressions with an equal sign between them; that is, an equation is a statement that two expressions are equal; however, there is no guarantee that the statement is true
- **New groups below:** show newly composed units on the line below the appropriate place in the addition algorithm
- **Simplifying strategy:** e.g., to solve $299 + 6$, think $299 + 1 + 5 = 300 + 5 = 305$

SAMPLE PROBLEMS

SAMPLE 1

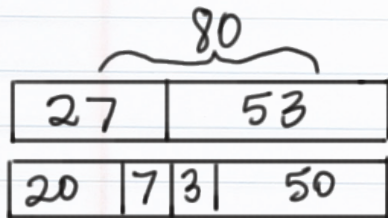
Students will be expected to use multiple strategies to solve one- and two- step word problems. Some scenarios will allow the student to choose their method while others will specify which strategy to use. The students should be able to solve problems using more than one strategy.

27 markers were in a crate. Sandra added 53 to it. How many are in the crate now?

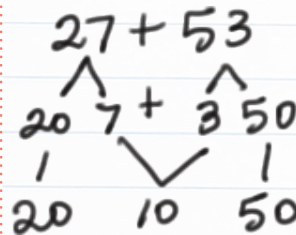
The arrow way:

$$27 \xrightarrow{10} 37 \xrightarrow{10} 47 \xrightarrow{10} 57 \xrightarrow{10} 67 \xrightarrow{10} 77 \xrightarrow{1} 78 \xrightarrow{1} 79 \xrightarrow{1} 80$$

Tape Diagram:

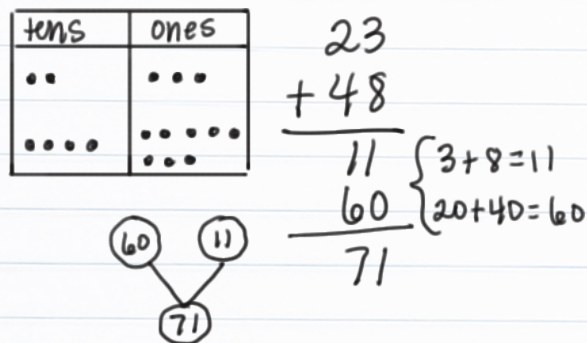


Number Bond:



SAMPLE 2:

The **totals below method** gives students the option of adding from left to right or from right to left. Students explain how each step of their math drawing relates to this written method.



HOW YOU CAN HELP AT HOME

- 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.