

# Eureka Math Parent Guide

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

GRADE K  
MODULE 4

## GRADE FOCUS

Kindergarten mathematics is about (1) representing, relating, adding and subtracting whole numbers, and (2) describing shapes and space.

- Module 1: Numbers to 10
- Module 2: Two-Dimensional and Three-Dimensional Shapes
- Module 3: Comparison of Length, Weight, Capacity, and Numbers to 10
- » **Module 4: Number Pairs, Addition and Subtraction to 10**
- Module 5: Numbers 10—20 and Counting to 100
- Module 6: Analyzing, Comparing, and Composing Shapes

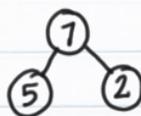
## LET'S CHECK IT OUT!

## MODULE 4 FOCUS

Module 4 marks the next exciting step in math for kindergartners—addition and subtraction. Students will start with composing and decomposing numbers using number bonds and move toward work with addition and subtraction equations.

### MORE SPECIFICALLY, CHILDREN WILL LEARN HOW TO:

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
- Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
- Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g.,  $5 = 2 + 3$  and  $5 = 4 + 1$ ).
- For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
- Fluently add and subtract within 5.
- Demonstrate an understanding of addition and subtraction by using objects, fingers, and responding to practical situations (e.g., If we have 3 apples and add two more, how many apples do we have all together?).
- Duplicate and extend (e.g., What comes next?) simple patterns using concrete objects.



$$5 + 2 = 7 \quad 7 - 5 = 2$$



The number 5 matches the daisies. 2 matches the tulips. 7 tells the total. 5 and 2 are the parts.

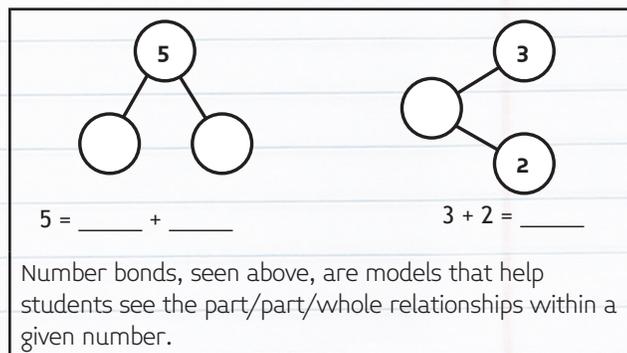
## TOPIC OVERVIEW

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

- Topic A: Compositions and Decompositions of 2, 3, 4, and 5
- Topic B: Decompositions of 6, 7, and 8 into Number Pairs
- Topic C: Addition with Totals of 6, 7, and 8
- Topic D: Subtraction from Numbers to 8
- Topic E: Decompositions of 9 and 10 into Number Pairs
- Topic F: Addition with Totals of 9 and 10
- Topic G: Subtraction from 9 and 10
- Topic H: Patterns with Adding 0 and 1 and Making 10

## WORDS TO KNOW

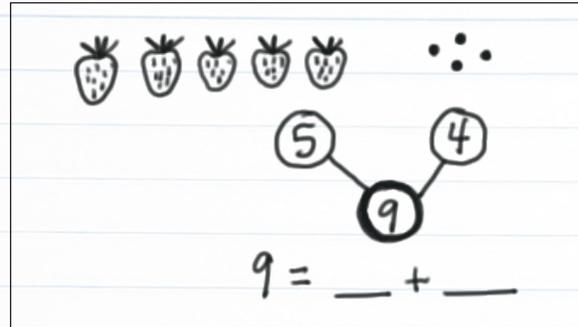
- **Addition**
- **Addition and subtraction sentences** (equations)
- **Make 10** (combine two numbers from 1 to 9 that add up to 10)
- **Minus** (-)
- **Number bond** (pictured)
- **Number pairs or partners** (embedded numbers)
- **Number sentence** ( $1 + 2 = 3$ )
- **Part** (addend or embedded number)
- **Plus** (+)
- **Put together** (add)
- **Subtraction**
- **Take apart** (decompose)
- **Take away** (subtract)
- **Whole** (total)



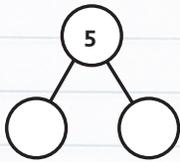
# SAMPLE PROBLEMS

## SAMPLE 1

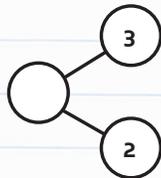
The number bond is a pictorial representation of part/part/whole relationships showing that smaller numbers (the parts) make up larger numbers (the whole). The number bond is a key model for showing students how to both take apart (decompose) and put together (compose) numbers with ease. This in turn leads directly to their emerging addition and subtraction skills.



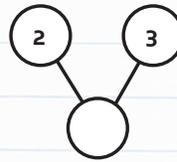
Students should be flexible with the number bond model oriented in various ways and be able to understand the part—part—whole components. By the end of the module, they will understand the number bond's relationship to the accompanying expression or equation.



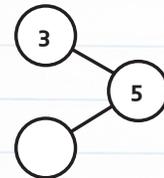
$$5 = \underline{\quad} + \underline{\quad}$$



$$3 + 2 = \underline{\quad}$$



$$2 + 3 = \underline{\quad}$$

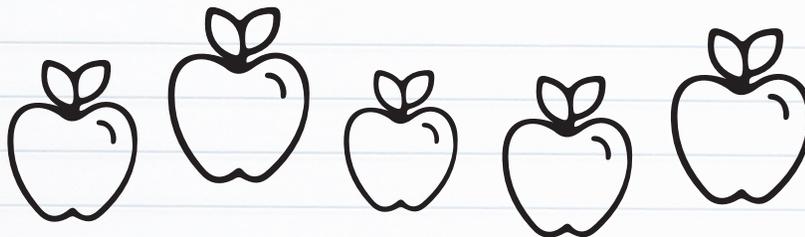


$$5 - 3 = \underline{\quad}$$

## SAMPLE 2

In this example, students move from more concrete (a picture of apples) to a number sentence, using words to the most abstract—a number sentence using a symbols.

There were 5 apples. Bill ate 1. Cross out the apple he ate. How many apples were left? Fill in the boxes.



5 take away 1 is \_\_\_\_\_

$$5 - 1 = \underline{\quad}$$