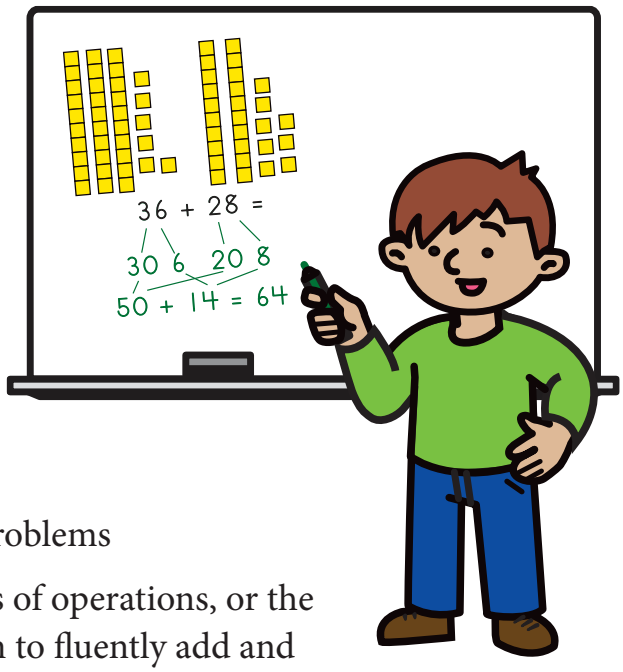
Bridges in Mathematics
Grade 3 Unit 1

Addition & Subtraction Patterns



In this unit, your student will:

- Use efficient math strategies to build fluency with basic addition and subtraction facts
- Determine whether two expressions are equal
- Write equations to represent one-step word problems
- Use strategies based on place value, properties of operations, or the relationship between addition and subtraction to fluently add and subtract within 100

Your student will practice these skills by solving problems such as these:

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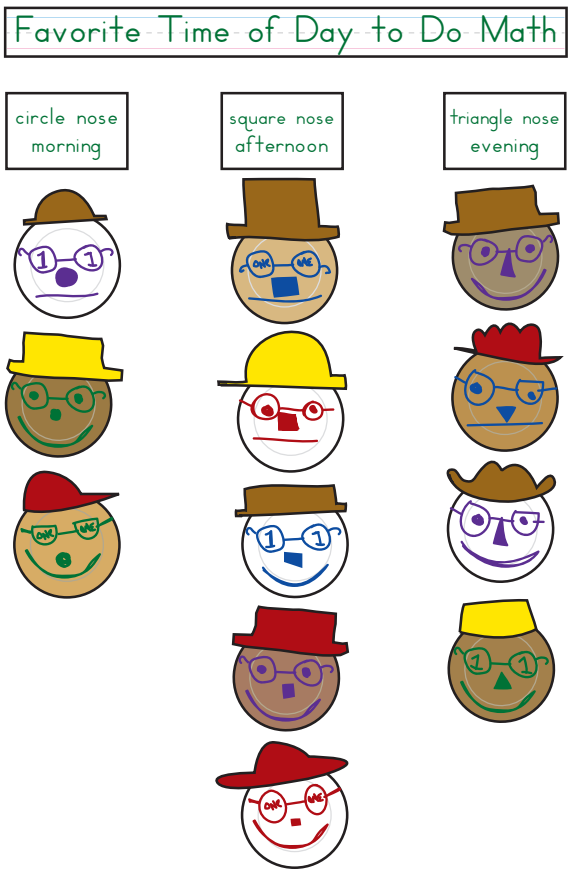
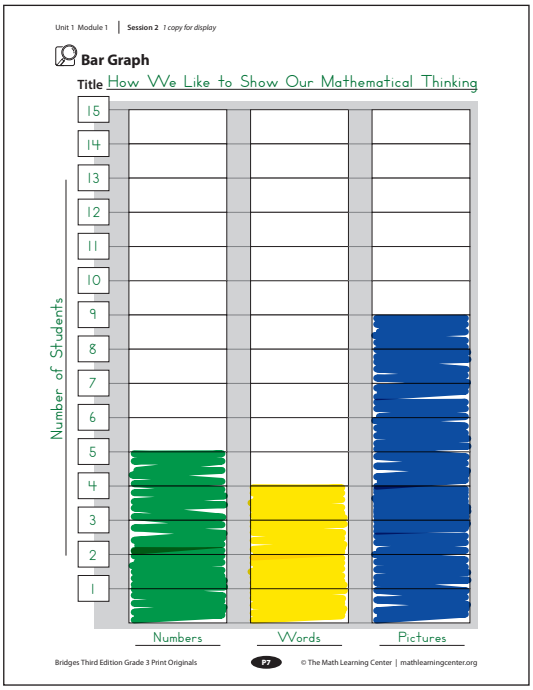
	Third grade students get acquainted by creating pictures that share information about their learning preferences. Sorting, classifying, and graphing this information sets the stage for algebraic reasoning and data collection. 

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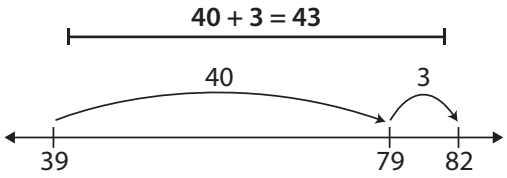
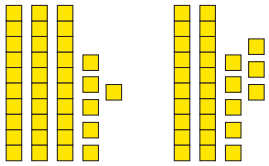
	Students also use the number line to find the difference between two numbers. Initially, they might begin by counting on and then move to jumping or counting in groups of 10s and 1s. For example, the difference between 39 and 82 is 43, which is shown on the number line as a jump of 40 followed by a jump of 3.
36 + 28 (30 + 6) + (20 + 8) 30 + 20 = 50 6 + 8 = 14 50 + 14 = 64 	Students break numbers apart by place value to add them. For example, they break 36 into 30 and 6 and 28 into 20 and 8. Then they add 30 to 20 and 6 to 8 separately. Finally, they add 50 and 14 for a total of 64. This is an important precursor to using the standard algorithm with understanding and fluency.
Commutative Property (3 + 9) + 7 = (9 + 3) + 7 Associative Property 3 + (7 + 9) = (3 + 7) + 9 After making these changes to the order and groupings of numbers, a student can find 3 + 9 + 7 by adding 3 and 7 first and then adding 9.	Students review strategies for the basic addition and subtraction facts, many of which rely on properties of numbers for addition. • *Commutative property*: numbers can be added in any order • *Associative property*: numbers can be regrouped before adding Students also study patterns on a table of addition facts and extend the strategies to greater numbers.

For additional support, you can use the Math Vocabulary Cards app at apps.mathlearningcenter.org.

Frequently Asked Questions About Unit 1

Q: Why do some of these activities look like what my student did in second grade?

A: This unit reviews mathematical concepts while introducing and establishing routines that will be used in third grade. Teachers assess students' skill level and plan future lessons based on this review. Students build addition and subtraction facts on the number rack and generalize their understanding of number relationships to problem-solving situations with greater numbers. This contributes to their ability to compute fluently.

Q: How can I support my student's learning at home?

A: There are many ways to support your student during this unit. Consider some of these activities:

- Visit mathathome.mathlearningcenter.org and work through some or all of the activities in Grade 3: Set 1. These activities provide fun ways to engage children in mathematical thinking. This set also includes digital versions of familiar games that your student has learned at school, such as Anything But 5.
- Help your student practice their addition and subtraction facts, focusing on the ones they need to practice. Ask your student about the different strategies they use to remember their facts.
- Visit apps.mathlearningcenter.org and invite your student to explore the Number Rack and Number Pieces apps. Throughout Unit 1, students explore these physical materials in the classroom.
- You might like to read a related book with your student such as *The Action of Subtraction*, written by Brian P. Cleary and illustrated by Brian Gable.