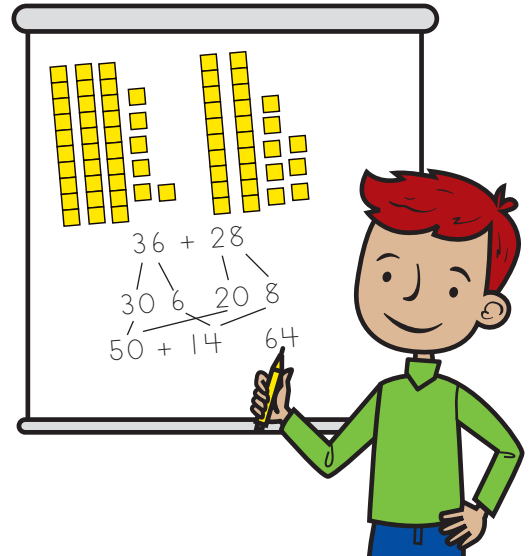


Addition & Subtraction Patterns

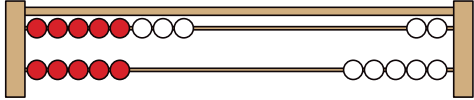
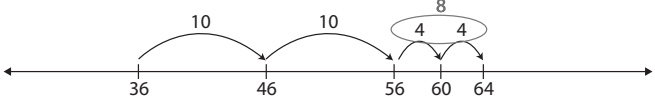
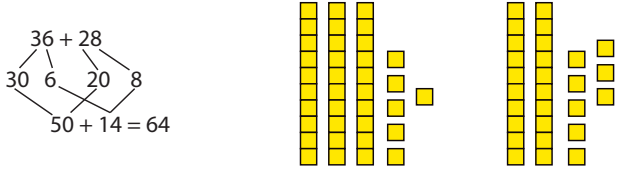
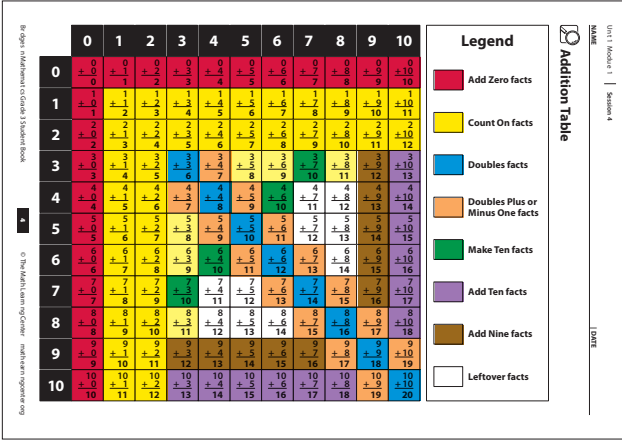
In this unit your child will:

- 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 story 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 child will learn and practice these skills by solving problems like those shown below. Keep this sheet for reference when you're helping with homework. Use the free Math Vocabulary Cards app for additional support: mathlearningcenter.org/apps

PROBLEM	COMMENTS												
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>How We Like to Show Our Mathematical Thinking</p> </div> <table style="width: 100%; text-align: center;"> <tr> <td style="border: 1px solid black; padding: 5px;">1s Numbers</td> <td style="border: 1px solid black; padding: 5px;">"one" Words</td> <td style="border: 1px solid black; padding: 5px;">dots Pictures</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	1s Numbers	"one" Words	dots Pictures										<p>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.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Unit 1 Module 1 Session 2 copy for display</p> <p>Bar Graph</p> <p>Title: <u>Students Who Like Working With Others</u></p> <p>The bar graph shows the number of students who prefer working with others. The y-axis is labeled 'Number of Students' and ranges from 0 to 15. The x-axis has two categories: 'With 1 Person' and 'Small Group'. The 'With 1 Person' bar is green and reaches the number 12. The 'Small Group' bar is yellow and reaches the number 6.</p> <p>Number of Students</p> <p>With 1 Person Small Group</p> <p><small>Bridges in Mathematics Grade 3 Teacher Masters © The Math Learning Center mathlearningcenter.org</small></p> </div>
1s Numbers	"one" Words	dots Pictures											

PROBLEM	COMMENTS
<p>$8 + 5 = \underline{\quad}$</p> 	<p>The number rack helps students visualize quantity and encourages them to think in groups. A child may “see” the number 8 as a combination of 5 and 3 more 5 red beads and 3 more white (beads). To solve $8 + 5$, then, the student can add $5 + 5 = 10$ and then $10 + 3 = 13$.</p>
	<p>Students will also use the number line or find the difference between two numbers. Initially, they may begin by counting on and then to jumping or counting in groups of tens and ones. For example, the difference between 36 and 64 is 28, which is shown on the number line as 2 jumps of 10 followed by 2 jumps of 4.</p>
	<p>Students break numbers apart by place value in order to add them. For example, they break 36 into 30 and 6 and 28 into 20 and 8. Then, they add 30 and 20 and 6 and 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.</p>
	<p>Students review strategies for the basic addition and subtraction facts, many of which rely on the commutative ($4 + 2 = 2 + 4$) and associative ($4 + 2 + 3 = 4 + (2 + 3)$) properties. They study patterns on the addition table and extend the strategies for use with larger numbers.</p>

FREQUENTLY ASKED QUESTIONS ABOUT UNIT 1

Q: Why do some of these activities look like what my child 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. When students build addition and subtraction facts on the number rack and generalize their understanding of number relationships to problem solving situations with larger numbers, this contributes to their ability to compute fluently.

Q: How can I help my child and make homework a successful experience?

A: Homework assignments are sent home two or three times per week during the school year. Teachers may also send home Daily Practice pages for additional work with concepts and skills. Although your child is doing similar activities in class, she may need your help at home. Take time to ask her to explain the assignment to you. If she can describe the task clearly and confidently, she can probably complete the assignment independently. Your child has used several models and strategies to solve problems. Encourage her to use ways that make sense to her. Then, review the completed assignment and ask your child to explain her thinking about some of the problems.