InsightMath Texas

Extending Addition and Subtraction within 1,000

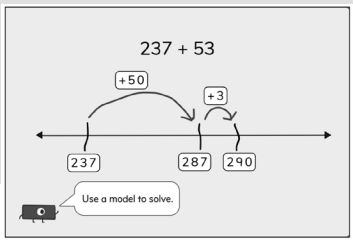
Family Guide | Grade 2 | Unit 6

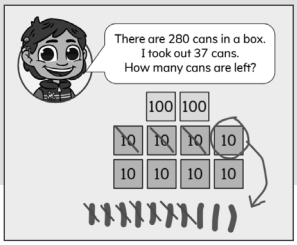
Your student is exploring how place value understanding helps to efficiently add, subtract, and estimate reasonableness of answers.

Key Math Ideas

Your student has experience with place value, such as recognizing numbers as groups of ones, tens and hundreds, and they have used place value strategies to add and subtract within 100. In this unit, students will expand this knowledge by composing and decomposing numbers to make addition and subtraction more efficient. It is important to note that students are not yet learning the standard algorithm for adding and subtracting (i.e., carrying and borrowing), but rather focusing on flexible strategies that will develop their conceptual understanding so they have more success in the future. See the Helpful Hints below for information on addition and subtraction strategies students will use throughout the unit.

When adding 237 + 53, students need to compose a new ten because 3 + 7 = 10.





When subtracting 280 - 37, students need to decompose a ten because 37 has 7 ones and 280 has 0 ones. Decomposing 1 ten into 10 ones allows them to subtract efficiently.

→ At the beginning of the unit, your student will learn to

- compose a new 10 when adding, such making exactly a new 10 when adding 158 + 32 or making a ten and some more when adding 158 + 35;
- decompose a 10 as needed when subtracting, such as noticing that in 165 - 47, 47 has more ones than 165, so students need to ask themselves, “What do I do?”;
- mentally add or subtract 1, 10, or 100 to or from a number, such as 495 + 1, 495 - 10, 495 + 100;
- mentally add or subtract multiples of 10 or 100 from three-digit numbers, such as 495 - 300, or 495 - 60.

→ In the middle of the unit, your student will learn to

- compose a new 100 when adding;
- decompose 100 as needed when subtracting;
- skip count forward and backward by ones and tens, including crossing into new hundreds;
- solve one-step and two-step addition and subtraction word problems with numbers up to 1,000.

→ At the end of the unit your student will learn to

- compose a 10 and/or 100 as needed to add;
- decompose a 10 and/or 100 as needed to subtract;
- find missing addends for sums of 100 given the other addend, such as 32 + ? = 100.

Helpful Hint

Throughout the unit, students add or subtract two-digit and three-digit numbers numbers by

- adding the hundreds, tens and ones separately, then combining;
- adding or subtracting one of the numbers in parts. For example, when subtracting 217 - 115, start with 217 and subtract 100 to get 117, then subtract 10 to get 107, then subtract 5 to get 102;
- adding or subtracting using nearby numbers. For example, to add 198 + 235, a student adds 200 to 235, then subtracts the extra 2 that was added.

Tips for Supporting Your Student at Home

Questions to Ask Your Student

→ Throughout the unit:

- Did you break the numbers apart to help you add or subtract? Why or why not?
- How can you use place value to add or subtract?
- What strategy did you use to find the answer?
- How can you try to a different strategy to check your thinking?
- Does your answer make sense? How can you estimate to know?
- How were you able to find the missing addend?
- What strategy did you use to find the answer?

If...	Try...
your student does not know where to start when solving an addition or subtraction problem . . .	asking them what they notice about the numbers and encourage them to work one step at a time. Ask, "What can you do first?" and "What can you do next?"

Student Strengths Spotlight

I keep trying, even when a problem is hard.	Students persevere while solving addition and subtraction problems using different strategies based on what makes sense for the problem.
I model my thinking.	Showing their addition and subtraction strategies, helps students reflect on efficient strategies. Sharing and comparing strategies helps them to learn from one another.

Try This Together!

- **Play a game!** You will need three dice per player. Each player will roll all three of their dice and rearrange their dice to make the greatest number possible. After each player has arranged their dice, compare each number and decide who has the greatest number. The player with the greatest number gets one point. Have students find the difference between the two numbers and discuss their subtraction strategy with you.
- **Would You Rather?** Pose some "Would You Rather?" questions to your student using addition and subtraction problems. For example, ask them, "Would you rather have 45 + 127 dollars or 107 + 63 dollars?" or "Would you rather 105 - 23 dollars or 327 - 62 dollars?" Have your student estimate the answer first, then find the actual answer and explain their strategy.
- **Track your minutes!** Have your student track how many minutes they do an activity over time, such as read or practice their hockey skills. For example, you could read each night and add to find the total number. For example, if your student reads for 23 minutes on Monday and for 45 minutes on Tuesday, they have read a total of 68 minutes. If they read for 32 minutes on Wednesday, they add 32 and 68 and have read a total of 100 minutes. Continuing adding on and discussing place value strategies when adding!