InsightMath Texas

Extending Place Value to 120

Family Guide | Grade 1 | Unit 8

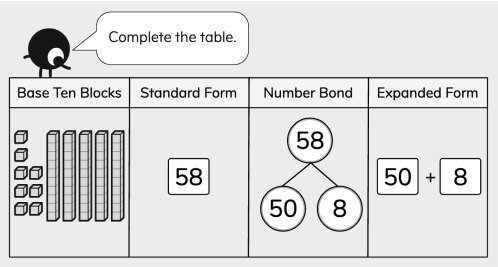
Your student is exploring how understanding the value of a three-digit number relies on understanding the decomposed values of its hundreds, tens, and ones.

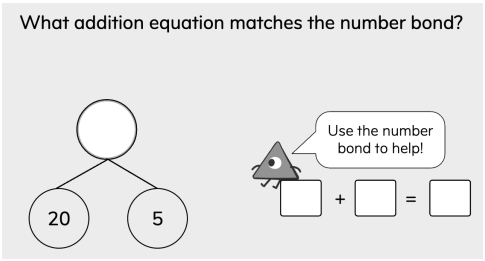
Key Math Ideas

In previous units, students explored how place value refers to the value of each digit in a number depending on where it is in a number. In this unit, students add multiples of 10 and a one-digit number as part of exploring how to break apart numbers by place value and write them in expanded form. They explore the value of each digit and how each place value contributes to the value of a number, such as how a number like 114 has 1 hundred. 1 ten and 4 ones, which supports their ability to use place value to compare two-digit and three-digit numbers within 120.

→ In the first half of the unit, your student will learn to

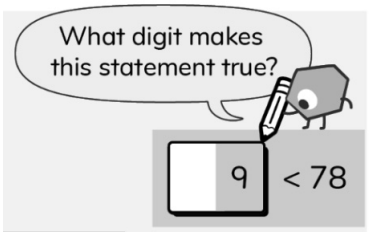
- translate between models, word form, standard form, and expanded form given a three-digit number up to 120;
- explain the importance of determining the number of units in each place even when there are 0;
- add a single-digit number to a multiple of 10;
- represent numbers in different, but equivalent, ways such as saying that 4 tens and 13 ones is equivalent to 5 tens and 3 ones;
- find the missing number in an addition equation, such as 65 = ? + 5.





→ In the second half of the unit, your student will learn to

- use place-value understanding to compare two-digit and three-digit numbers up to 120, such as by saying, “82 is greater than 79 because 8 tens is more than 7 tens;”
- use the comparison signs >, <, and = to complete statements that compare numbers;
- write two inequality statements when comparing the same two 2-digit numbers, such as 82 > 79 and 79 < 82;
- use place-value understanding to fill in missing digits in two-digit and three-digit numbers up to 120 to make a comparison statement true, as shown in the example to the right.



Helpful Hint

Referring to digits in two-digit numbers using their value helps to cement your student’s place-value understanding and support their ability to compare numbers. For example, refer to the 2 in 29 as 2 tens (or 20), not simply 2. This supports your student’s understanding that the value of a two-digit number relies on the value of each digit. In two-digit numbers with the digit 0 in the ones place, such as 30, sometimes students interpret the place-value as “nothing.” For example, students may interpret 30 and 3 as the same value. Address this misconception by having your student model both numbers and ask if the amounts are the same. You can also have them read the numbers aloud to see if they hear the same number.

Tips for Supporting Your Student at Home

Questions to Ask Your Student

→ In the first half of the unit:

- How can you represent the addition problem with a number bond?
- How can you represent the number in expanded form? *(hint: try this with two-digit and three-digit numbers)*
- Are 4 tens and 13 ones equivalent to 5 tens and 3 ones? How do you know?

→ In the second half of the unit:

- Which number is greater? Which is less? How do you know?
- Which place value do you look at first when comparing numbers?
- Which comparison sign will you use to complete the inequality?
- How can you order the numbers from least to greatest?

If...	Try...
your student is using the value of a single digit to determine which is greater when comparing two-digit numbers (i.e. saying 29 is greater than 32 because 9 is greater than 3 or 2) . . .	asking your student how many tens and ones are in the number. Recognizing that 2 tens is less than 3 tens will help them to compare using their place-value understanding.

Student Strengths Spotlight

We learn from our mistakes. Mistakes when comparing numbers help students grow their number sense and better understand place value relationships.

We model our thinking. Students use models to represent two-digit and three-digit numbers to show the value of each digit and help to compare numbers.

Try This Together!

- **Create Comparisons.** During daily activities, such as packing snacks or doing arts and crafts, share with your student how many of an item you have. Ask them to tell an amount that would be greater and an amount that would be less. For example they may say that 109 beads is fewer than 112 beads because 0 tens is less than 1 ten.
- **Would you rather?** Ask your students would you rather using quantities to compare numbers. For example, "Would you rather see 23 or 34 spiders?" and have your student explain why using "greater than" and "less than" language.
- **Play a game!** Using a deck of cards with face cards removed, turn two over to make a two digit number. For example, the 4 card and 3 card could make 43. Have your student tell you the value of each digit in 43 and how to write it in expanded form. Then try with a three-digit number between 100 and 120 using the ace as the 1 hundred.