

Unit 5

Numbers to 1,000

Essential Question

- How can we represent and compare the values of numbers greater than 100?

302



Unit Story: 302 Ricotta Drive

You can read the Unit Story with your student by visiting the Unit Story page on the Caregiver Hub.

Unit Investigation

Lesson 1 is the Unit Investigation. Students develop and compare methods of counting between 200 and 400 paper clips to build curiosity and apply their own knowledge in a variety of ways. Use the **Caregiver Connection** to help students continue to explore the math they will see in the unit.

Caregiver Connection

Students may enjoy organizing and counting large quantities of objects at home, such as craft supplies, blocks, or coins.

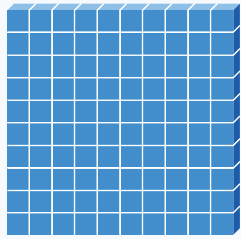
You can ask:

- “How did you count the objects?”
- “What is another way you could count?”
- “Which way do you prefer counting large amounts of objects?”

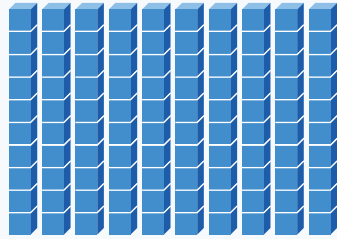
Summary | Lesson 2

There are many ways to count and compose numbers.

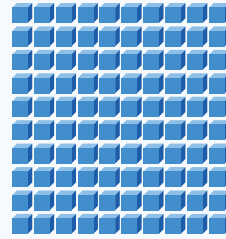
A hundred can be composed with 10 tens, 100 ones, or tens and ones put together.



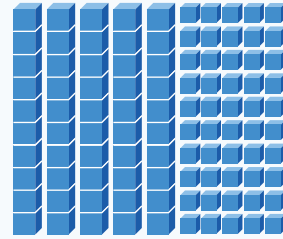
a hundred



10 tens



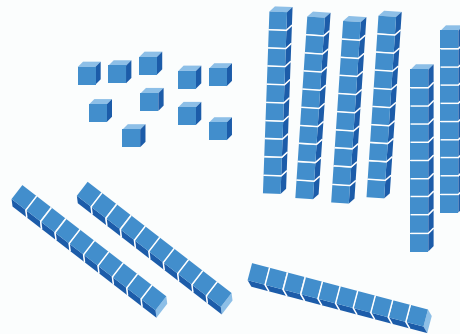
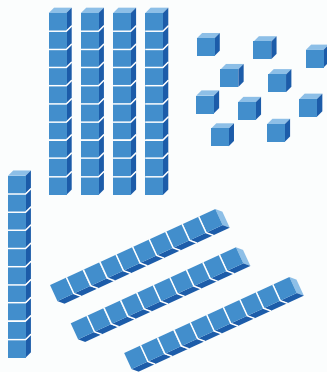
100 ones



5 tens 50 ones

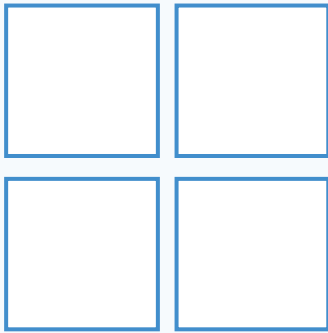
Try This

- 1 Circle the representation that shows a hundred.

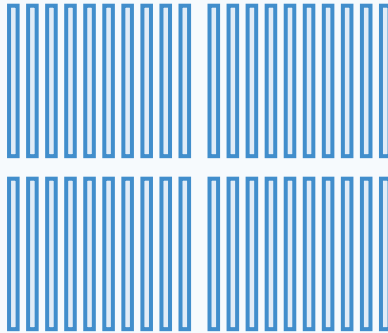


There are many ways to compose numbers greater than 100. Patterns in the numbers can help you figure out how many hundreds, tens, and ones you can use.

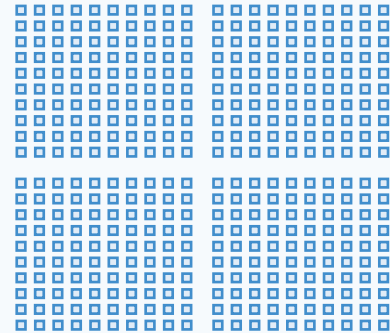
400



4 hundreds



40 tens



400 ones

Try This

1 How many tens would you need to build 600?

_____ tens

2 How many hundreds and tens could you use to build 600?

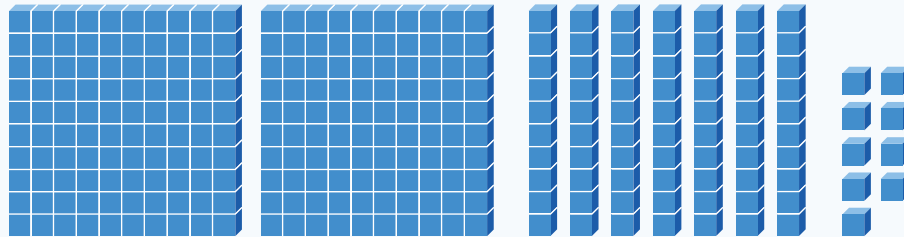
_____ hundreds _____ tens

3 How many tens would you need to build 800?

_____ tens

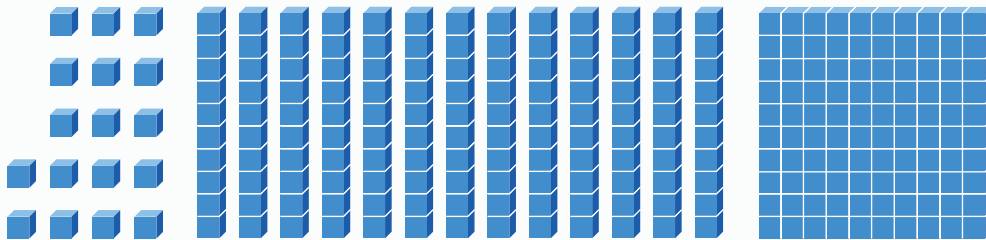
The digits in a three-digit number written in **standard form** represent the amounts of hundreds, tens, and ones. Sometimes, you can compose hundreds or tens to help you find the value.

279



Try This

Use the base-ten block representation for Problems 1–3.



Record the amounts of hundreds, tens, and ones.

1 How many hundreds are there? _____

2 How many tens are there? _____

3 How many ones are there? _____

Three-digit numbers have a hundreds place, a tens place, and a ones place that represent the amount of each unit. You can use the relationship between place values to represent a three-digit number in different ways.

374



Try This

- 1 Write the number in standard form.



- 2 Write amounts of hundreds and tens that could be used to make 629. You can show your work in the box if it is helpful.

hundred(s)	ten(s)	ones
		19

Three-digit numbers can be represented in **expanded form** by writing an addition expression that represents the sum of the values of each digit. Numbers can have the same digits, but the value of a digit depends on its place in a number.



$$300 + 60 + 7$$

$$60 + 300 + 7$$

$$7 + 60 + 300$$



$$700 + 6 + 30$$

$$30 + 6 + 700$$

$$6 + 700 + 30$$

Try This

For Problems 1 and 2, use the digits 1, 8, and 6.

- 1 Write the *greatest* three-digit number you can make in standard form.

- 2 Write the *greatest* three-digit number you can make in expanded form.

When reading and writing the name of a three-digit number, it is helpful to think of the value of each digit. When the value of a digit is 0, no words are used to describe that part of the number.

242

$200 + 40 + 2$

I see 2 hundreds, 4 tens,
and 2 ones. This number is
two hundred forty-two in words.

Try This


- 1** Write the number 982 in words.

- 2** Write the number *four hundred thirty* in standard form.

- 3** Write the value of the expression $60 + 200 + 7$ in words.

Summary | Lesson 8

The digits in a three-digit number represent the amounts of hundreds, tens, and ones. A three-digit number can be represented in different ways to help you make sense of its value.

Base-ten diagram 	Amount of units 3 hundreds 5 tens 2 ones
In words three hundred fifty-two	Expanded form $300 + 50 + 2$

Standard form
352

Try This

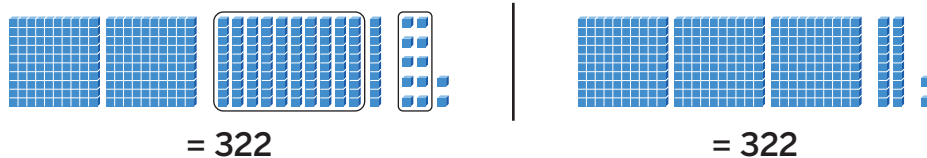
For Problems 1 and 2, represent the number 279 in 2 different ways.

1

2

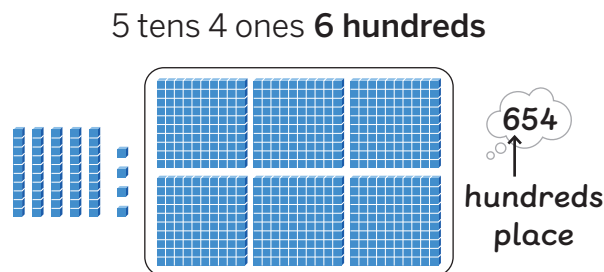
In this sub-unit . . .

- We discovered that **a hundred** can be composed of 10 tens, 100 ones, or a combination of tens and ones put together in different ways.



Math tip: Noticing patterns in the numbers can help you determine how many hundreds, tens, and ones to use.

- We noticed that the digit in the hundreds place, which is to the left of the tens place, represents an amount of hundreds.



- We represented three-digit numbers in different ways, including **standard form** and **expanded form**.

Base-ten blocks	Amount of each unit	Standard form	Expanded form	In words
	2 hundreds 6 tens 4 ones	264	$200 + 60 + 4$	two hundred sixty-four

Math tip: Representations can look different and represent the same amount.

You can compare three-digit numbers by first comparing hundreds to hundreds, then tens to tens, and then ones to ones.

$$\begin{array}{ccc} \underline{1}54 < \underline{2}11 \\ \uparrow & & \uparrow \\ \text{hundreds} & & \text{hundreds} \end{array}$$

154 has one hundred and 211 has two hundreds, so 154 is less than 211.

Try This

For Problems 1–3, write $<$, $>$, or $=$ to make the comparison statement true.

1 241 _____ 141

2 765 _____ 766

3 809 _____ 809

When finding numbers that are greater than or less than other numbers, it is important to consider the value of a digit and the place in the number where the digit is located.

The *greatest* three-digit number you can make with these digits is **931**.

The *smallest* three-digit number you can make with these digits is **139**.

931 > **139** and **139** < **931**

1

3

9

Try This

For Problems 1–3, use the numbers from the number bank to make the comparison statement true. Use each number only once.

602

327

459

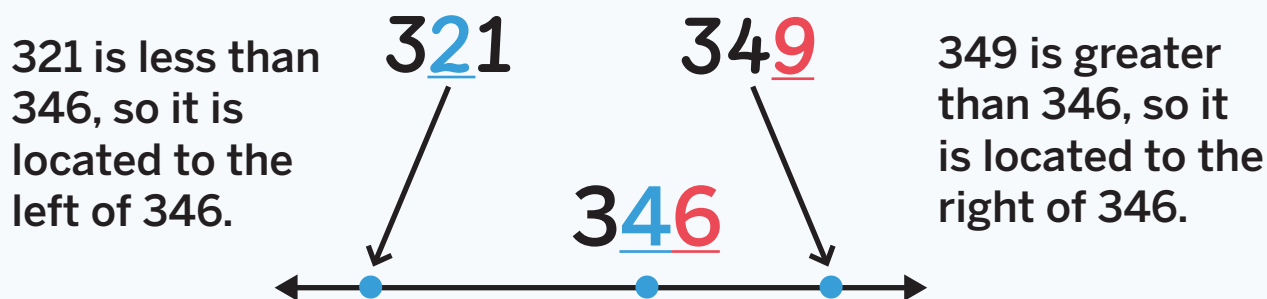
1 _____ < 513

2 936 > _____

3 _____ < 444

Summary | Lesson 11

A number line can be used to represent three-digit numbers. You can compare the numbers to figure out their locations on a number line.



Try This

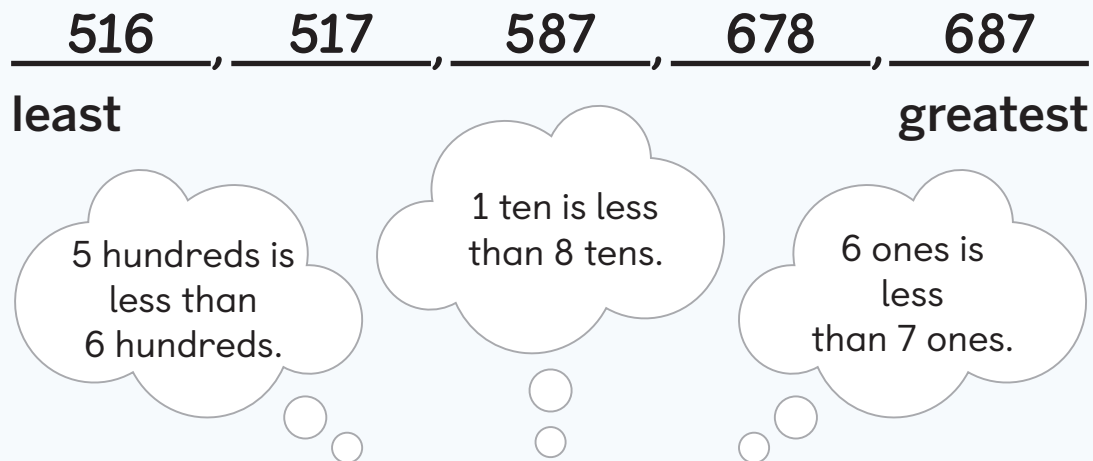
- 1 Mark and label a point that could represent 711.



- 2 Label the unlabeled point with a possible number based on its location on the number line.



You can order a set of numbers by comparing 2 numbers at a time or by comparing the hundreds places first, then the tens places, and then the ones places.



Try This

For Problems 1 and 2, use the numbers from the number bank.

396

277

369

727

772

- 1** Order and record the numbers from *greatest* to *least*.

_____, _____, _____, _____, _____

greatest least

- 2** Order and record the numbers from *least* to *greatest*.

_____, _____, _____, _____, _____


least greatest

In this sub-unit . . .

- We compared and ordered three-digit numbers by comparing hundreds to hundreds first, followed by tens to tens, and then ones to ones.

$$\begin{array}{ccc} 154 & < & 211 \\ \uparrow & & \uparrow \\ \text{hundreds} & & \text{hundreds} \end{array}$$

154 has one hundred and 211 has two hundreds, so 154 is less than 211.

 **Math tip:** If the digits in the hundreds places are the same, then compare the digits in the tens places. If the digits in the hundreds place and the tens place are the same, then compare the digits in the ones places.

- We saw that, when creating numbers that are greater or less than other numbers, the value of the digit and its place in the number must be considered.

3

9

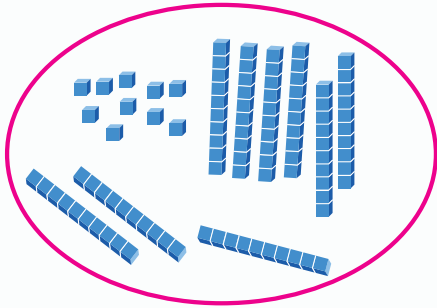
1

The greatest three-digit number you can create with these digits is 931.

The smallest three-digit number you can create with these digits is 139.

Lesson 2

1



Lesson 3

1 60 tens

2 Sample response:
6 hundreds 0 tens

3 80 tens

Lesson 4

1 1

2 13

3 17

Lesson 5

1 287

2 Sample response:
6 hundred(s)
1 tens

Lesson 6

1 861

2 Sample response:
 $800 + 60 + 1$

Lesson 7

1 nine hundred eighty-two

2 430

3 two hundred sixty-seven

Lesson 8

1 Sample response: two hundred seventy-nine

2 Sample response: $200 + 70 + 9$

Lesson 9

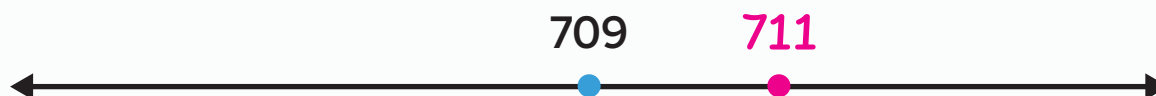
1 $>$ 2 $<$ 3 $=$

Lesson 10

1 459 2 602 3 327

Lesson 11

1 Sample response:



2 Sample response:



Lesson 12

1 772, 727, 396, 369, 277

2 277, 369, 396, 727, 772