Unit 4, Lesson 12

Compare Multi-Digit Numbers

Let's compare large numbers.

Warm-up

Which Three Go Together: Friendly Numbers

Which 3 go together?

A. 1,095

B. 3,195

C. 9,053

D. 31,095

Activity 1

Which Is Greater?

Your teacher will give you a set of cards, each with a single digit, 0–9.



1. Use the cards for 2, 7, and 8 to make two different three-digit numbers. Use > or < to compare them.

   ☐☐☐ ___ ☐☐☐

2. Now include the digit 1 to make two different four-digit numbers. Compare the numbers.

   ☐,☐☐☐ ___ ☐,☐☐☐

3. Shuffle the cards. Repeat what you did earlier with new cards.

   a. Four-digit numbers

      ☐,☐☐☐ ___ ☐,☐☐☐

   b. Five-digit numbers

      ☐☐,☐☐☐ ___ ☐☐,☐☐☐

   c. Six-digit numbers

      ☐☐☐,☐☐☐ ___ ☐☐☐,☐☐☐

4. For each pair you compared, how did you decide which number is greater?

Activity 2

Incomplete Numbers

1. Here are 2 numbers. In both numbers, the unknown digit is the same.



   - Han says the numbers can't be compared because they are incomplete.
   - Clare says the second number is greater, no matter what the unknown digit is.

   Do you agree with either one of them? Explain your reasoning.

2. Here are some pairs of numbers. The numbers in each pair have the same unknown digit. Can you tell which number is greater? Explain your reasoning.

   a. 4 9 ☐
      3 ☐ 9

   b. 1 , ☐ 7 2
      1 , ☐ 8 5

   c. 8 , ☐ 1 6
      5 , 8 ☐ 2

d. 27,□95
2□,745

e. □90,165
9□0,064

Activity 3

Is It Possible?

1. Each of the following pairs of numbers has the same unknown digit but in different places.

   Your teacher will assign a digit to you. Use it as the unknown digit and decide if each comparison statement is true.

   a. $\square,999 > \square,500$

   b. $15,2\square0 > 15,\square02$

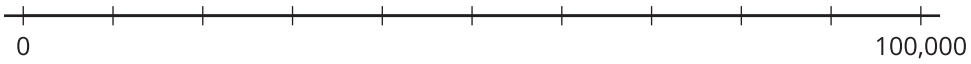
   c. $4\square,700 < 7\square,400$

   d. $1\square5,000 > 5\square1,000$

2. Here are 2 numbers, each with the same unknown digit.

   $4\square,300$ $\quad$ $3\square,400$

   Choose a digit to complete the numbers and show where they would be on the number line.



3. Is it possible to fill in the 2 blanks with the same digit to make each statement true? If you think so, give at least one example of what the digits could be. If not, explain why it is not possible.

   a. $4\square,300$ is less than $3\square,400$

   b. $\square4,300$ is less than $\square3,400$.