

Comparable Comparisons

Purpose

Students will convert between numbers in words and numbers in figures and compare numbers by using the symbols $>$, $<$, and $=$.

Materials

For the teacher: chalkboard, chalk

For each student: copy of Black Line Master (BLM) *Comparable Comparisons*, pencil

Activity

A. Introduction

- Write 1,245,078.693 on the board and talk about the place value: the 1 is in the millions place, the 2 is in the hundred thousands place, the 4 is in the ten thousands place, the 5 is in the thousands place, the 0 is in the hundreds place, the 7 is in the tens place, the 8 is in the ones place, the 6 is in the tenths place, the 9 is in the hundredths place, and the 3 is in the thousandths place.
- Write 74.05 and 74.44 on the board. Ask: "Is 74.05 larger or smaller than 74.44?"
- Say: "74.05 is smaller because the 7s in the tens place are the same and so are the 4s in the ones place, but in the tenths place the 0 is less than 4 ($0 < 4$). We look at the digits and their place value to compare."
- Say: "Let's start with 800.4 and write some numbers larger and some numbers smaller." Take time for each student to answer. Write the numbers so they can look at the numbers and think about greater and smaller.

B. Teacher-Led Activity

- Hand out the BLM *Comparable Comparisons*.
- Say: "Let's look at the example. We are trying to write a number equal to the given number using a 2 and a 7. Did you write "no answer" because it would take a 4 in the first blank and a 2 in the next blank?"

(continued)

EXTENDING
THE



ACTIVITY

Have students take the numbers from the original problems and put them in order from least to greatest.

MEETING
INDIVIDUAL



NEEDS

Direct students who are having difficulty to write the original problem with the same number of blanks as the answer and then fill in the blanks.

Standards Links
5.1.7, 5.2.6

Activity (continued)

3. Say: "Now let's write a number that 4.002 is greater than, using a 2 and a 7 in the blanks. Did you put a 2 in the first blank and a 7 in the next blank?"
4. Say: "Next let's write a number that 4.002 is less than, using a 2 and a 7 in the blanks. Did you put a 7 in the first blank and a 2 in the last blank?"
5. Say: "Next we will write the given number in words." Check to see that students write four and two thousandths.


C. Student Activity


1. Tell students to do the rest of the BLM in the same way.
2. After students are finished, have them check their answers with another student or in a group.


Questions for Review


Basic Concepts and Processes


During the activity, discuss the following questions with your students:

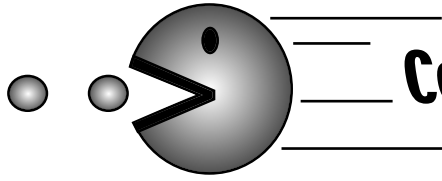
 Why is it important to think about the numbers to the left of the decimal?

 Is there more than one answer for $<$?

 Is there more than one answer for $>$?

 If the numbers that we are comparing are smaller than one, what can be used to help?

 Compare 0.23 and 0.023.



Name: _____

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If there is no answer possible, write "no answer."
Often there will be more than one answer.

Example: 4.002 using a 2, and a 7:

$$4.002 = \underline{\quad} . \underline{\quad} \underline{\quad} \text{ or } \underline{\hspace{2cm}}$$

$$4.002 > \underline{\quad} . \underline{\quad} \underline{\quad} \quad 4.002 < \underline{\quad} . \underline{\quad} \underline{\quad}$$

In words _____

1. 42.03 using a 0, a 2, and a 3:

$$42.03 = 4 \underline{\quad} . \underline{\quad} \underline{\quad} \text{ or } \underline{\hspace{2cm}}$$

$$42.03 > 4 \underline{\quad} . \underline{\quad} \underline{\quad} \quad 42.03 < 4 \underline{\quad} . \underline{\quad} \underline{\quad}$$

In words _____

2. 7,001,200 using a 1, and an 8:

$$7,001,200 = \underline{\quad} , \underline{\quad} 001,200. \underline{\quad} \text{ or } \underline{\hspace{2cm}}$$

$$7,001,200 > \underline{\quad} , \underline{\quad} 001,200. \underline{\quad} \quad 7,001,200 < \underline{\quad} , \underline{\quad} 001,200. \underline{\quad}$$

In words _____

3. 80.41 using a 0, a 1, and a 4:

$$80.41 = 8 \underline{\quad} . \underline{\quad} \underline{\quad} \text{ or } \underline{\hspace{2cm}}$$

$$80.41 > 8 \underline{\quad} . \underline{\quad} \underline{\quad} \quad 80.41 < 8 \underline{\quad} . \underline{\quad} \underline{\quad}$$

In words _____

4. 0.01 using a 0 and a 7:

$$0.01 = 0.0 \underline{\quad} \underline{\quad} \text{ or } \underline{\hspace{2cm}}$$

$$0.01 > 0.0 \underline{\quad} \underline{\quad} \quad 0.01 < 0.0 \underline{\quad} \underline{\quad}$$

In words _____

5. 998.9 using a 9, an 8, and a 0:

$$998.9 = 99 \underline{\quad} . \underline{\quad} \underline{\quad} \text{ or } \underline{\hspace{2cm}}$$

$$998.9 > 99 \underline{\quad} . \underline{\quad} \underline{\quad} \quad 998.9 < 99 \underline{\quad} . \underline{\quad} \underline{\quad}$$

In words _____

Comparable Comparisons

Teacher Directions

Distribute the BLM *Comparable Comparisons* to students. Lead students through the example and then have them complete the BLM.

Answer Key

Example: for = no answer
for > 2.007
for < 7.002
In words: four and two thousandths

1. for = 42.03
for > 40.23 or 40.32 for < 43.20 or 43.02 or 42.30
In words: forty-two and three hundredths

2. for = no answer
for > 1,001,200.8 for < 8,001,200.1
In words: seven million one thousand two hundred

3. for = 80.41
for > 80.14 for < 84.10 or 84.01 or 81.04 or 81.40
In words: eighty and forty-one hundredths

4. for = no answer
for > 0.007 for < 0.070
In words: one hundredth

5. for = 998.90
for > 998.09 or 990.89 or 990.98 for < 999.08 or 999.80
In words: nine hundred ninety-eight and nine tenths