

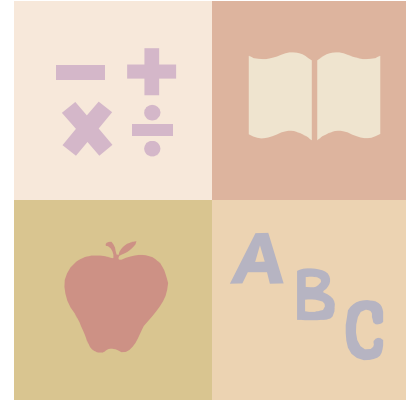
# Algebra/Geometry Institute Summer 2005

## Decimals Anyone?

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**School: West Bolivar Middle School**

**Grade Level: 7<sup>th</sup>**



### 1 Teaching objective

1a Compare and order decimals

### 2 Instructional Activities

( This lesson will be implemented after all students have mastered reading and writing decimals.)

- The teacher will begin the class with a five problem review on reading and writing decimals. (See attachment 1)
- The teacher will take up and grade all papers.
- The teacher will ask the following questions to start the class discussion:
  - 1) Who invented the decimal? Answer: Simon Stevens
  - 2) Why do we need the decimal point? Answer: To represent a part of a whole
- The teacher will give the following scenario:

“At the last practice, Dale Earnhardt, Jr.’s lap time was 55.786 seconds, and Jeff Gordon’s lap time was 55.732 seconds. Who’s lap time was the quickest?”
- The teacher will explain that in order to determine who’s lap time was the quickest we compare the decimal numbers using  $<$  (less than),  $>$  (greater than), or  $=$  (equal to) and then compare each digit from left to right.
- The teacher will walk around and check to see if all students have the correct answer.
- The teacher will write three sets of numbers on the board and ask the students to compare them using  $<$ ,  $>$ , or  $=$ .

1.326	1.316
23.65	23.650
14.58	13.14
- The teacher will discuss the answers to the three sets of numbers by having students explain what steps they use to get their answer.

- The teacher will give the students a worksheet to be checked for understanding. (attachment 2)
- The teacher will write three decimal numbers on the board and ask the class to write the largest number on their paper and explain why they chose that number.  

$$2.129 \quad 2.123 \quad 2.167$$
- The teacher will ask for volunteers to explain the process they used.
- The teacher will give three steps to follow when ordering decimals.
  - 1) Align the numbers so that the decimals are directly on top of each other.
  - 2) Work from left to right comparing the digits.
  - 3) Continue moving to the right until you arrive at a column where the digits are not the same.
- The teacher will put another example on the board and ask the class to order these decimals from greatest to least.  

$$3.672 \quad 3.521 \quad 2.670$$
- The teacher will divide the students into groups of four and have them complete an activity on decimals. (attachment 3)

### 3

#### Materials

Color pencils  
 Index cards  
 Construction paper  
 Yarn  
 Scissors  
 Paper clips  
 Attachment 3

#### Resources

Website: [www.gomath.com](http://www.gomath.com)

Website: [www.edhelper.com](http://www.edhelper.com)

Textbook: Glencoe Mathematics; The McGraw-Hill Companies. Copyright 2001.

#### 4 Assessment

- The teacher will observe the students as they work at their seats. The teacher will look to see if the students are following the given directions.
- Performance assessment: The teacher will allow each group to explain their number line to the class. All papers will be taken up and graded.

Directions: Match the word form with the numerical form by placing the alphabet of the word form in the blank.

\_\_\_\_\_ 1.) 0.627

A. nine and two tenths

\_\_\_\_\_ 2.) 4.009

B. four and nine hundredths

\_\_\_\_\_ 3.) 600.027

C. six hundred and twenty-seven thousandths

\_\_\_\_\_ 4.) 9.2

D. six hundred twenty-seven thousandths

\_\_\_\_\_ 5.) 4.09

E. four and nine thousandths

Directions: Compare the following decimals by drawing a circle around your answer choice.

1.) Which symbol should be used to make this a true statement?

$$1.325 \text{ \_\_\_\_\_ } 1.316$$

A. >

B. <

C. =

2.) Which of the following is not true?

A.  $4.237 > 4.234$

B.  $6.370 < 6.369$

C.  $7.8192 < 7.8195$

3.) Which symbol should be used to make the following a true statement?

$$5.417 \text{ \_\_\_\_\_ } 5.4170$$

A. >

B. <

C. =

4.) Which of the following is true?

A.  $4.09 > 4.009$

B.  $18.74 = 18.7$

C.  $10.6 < 10.59$

5.) Which of these statements is true?

A.  $1.31 < 1.3$

B.  $0.97 = 1.06$

C.  $1.22 > 1.02$

## ACTIVITY

You will have 15 minutes to complete and display your number line.

Step 1: Take the given envelope with 10 decimal numbers in each one.

Step 2: Arrange the numbers in order from least to greatest.

Step 3: Take the yarn and cut it to make a number line.

Step 4: Take the index cards, use color pencils and construction paper, and put the whole numbers 0 to 10 on separate cards and place them on your number line.

Step 5: Take the paper clips and clip your numbers on the number line in order from least to greatest. (Make sure your numbers are correctly placed between the whole numbers.)

Step 6: When your group is called, go to the board and place your number line. Explain the steps you used to decide where to place your numbers.