NUMBER CONCEPTS SESSION

Activity: Comparing and Ordering Whole Numbers

Objective: Use place value to compare and order whole numbers

Materials: Place Value Board
             Base Ten Blocks
             Overhead Base Ten Blocks

Procedures:

1. Arrange the participants in groups of four. Each group should receive the following base ten blocks: 50 units, 20 longs, 10 flats. Each group should have a copy of the handout.

2. Again allow for free exploration of base ten blocks; have participants give relationships. (10 units = 1 long)

3. Within each group have participants show the number 36 and the number 25 using the smallest number of blocks that is possible. (Make 25 and 36 using the overhead base ten blocks) To make 36 you should have 3 longs and 6 units; to make 25 you should have 2 longs and 5 units.

4. What is the largest place value that exists in either number? (tens) Both numbers have tens, but neither number has a set of hundreds or thousands. Which number has more sets of tens? (36)

5. We are going to practice writing our choices and our decision on the handout. Write the corresponding number of tens and ones for the number 36 on line "A" on the handout; write the corresponding number of tens and ones for the number 25 on line "B."

6. Compare the digits in the tens column and in the ones column. Now write the correct number sentence that shows the relationship between 36 and 25 in the "NUMBER SENTENCE" column. Your number sentence should be 36>25 or 25<36.

7. Each group needs to make sets of blocks for 217 and 227. (Give participants time to make these with their blocks)

8. How many flats do you have for 217? (2)

9. How many longs for 217? (1)

25

10. How many units for 217? (7)

11. How many flats do you have for 227? (2)

12. How many longs do you have for 227? (2)

13. How many units do you have for 227? (7)

14. Let's compare the number of flats in the two numbers. Match them together. When comparing only flats, each number has two. So each number is at least 200.

15. Let's compare the number of longs in the first two numbers. Match them together. When comparing only longs we find that 217 has one and 227 has two. At this point we do not have to go any further, 227 is larger than 217, and we don't even have to consider the number of ones in each number.

17. Let's practice writing our choices and the number sentence on the handout. Write the number of hundreds, tens, and ones there are in 217 on line "A" and the number of hundreds, tens, and ones there are in 227 on line "B". Write your number sentence in the last column: 217 < 227 or 227 > 217. (Less than <)

18. Using your base ten blocks and place value boards answer the following questions.
    a. For the local pet show, dogs are being lined up according to weight, from the heaviest to the lightest. Rover weighs 90 pounds, Spot weighs 25 pounds, Trixie weighs 32 pounds, and Sam weighs 71 pounds. In what order should they line up for the show?
    b. Angela, Barbara, Cheryl, Dorothy and Eve are saving bottle caps. Angela has 287, Barbara has 163, Cheryl has 421, Dorothy has 136 and Eve has 412. If the girls ordered themselves by the number of bottle caps they collected, who would be in the middle?
    c. Order the following numbers from the least to greatest.
        2,372   1,941   1,453   3,431

Extensions:
    1. Compare numbers using non-proportional counters for place value.
    2. Have students make up story problems for each other.
    3. Also have students order numbers from greatest to least.

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Comparing Whole Numbers Mat

Thousands	Hundreds	Tens	Ones	Number Sentence

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