

3rd Grade Math: Comparing and Ordering Numbers

Lesson Objective:

By the end of this lesson, students will be able to:

- Compare two or more numbers to determine which is greater or smaller.
- Order a set of numbers from smallest to largest or largest to smallest.
- Use place value to help compare and order numbers.

1. Introduction to Comparing and Ordering Numbers

Comparing Numbers:

- To **compare** numbers, we look at the digits in each place value (hundreds, tens, ones).
- The number with the larger digit in the highest place value is greater.

Ordering Numbers:

- To **order** numbers, we arrange them in a specific sequence: smallest to largest or largest to smallest.

2. Comparing Numbers

Activity 1: Comparing with Place Value

1. **Materials:** Place value charts, number cards, and comparison symbols ($<$, $>$, $=$).
2. **Instructions:**
 - Introduce the concept of comparing numbers by examining the place values.
 - Write two numbers on the board (e.g., **345** and **278**).
 - Use a place value chart to compare the digits:
 - Hundreds place: 3 (in 345) vs. 2 (in 278) – 3 is greater, so **345** is greater.
 - Use comparison symbols to show the relationship: **345 > 278**.

Activity 2: Comparing Using Comparison Symbols

1. **Materials:** Number cards, comparison symbols, paper, and pencils.
2. **Instructions:**
 - Provide students with pairs of numbers (e.g., **423** and **356**).
 - Have students use comparison symbols to show the relationship (e.g., **423 > 356**).
 - Review the answers and discuss the process of comparing place values.

3. Ordering Numbers

Activity 3: Ordering a Set of Numbers

1. **Materials:** Number cards, paper, and pencils.
2. **Instructions:**
 - Give students a set of numbers (e.g., **54, 76, 32**).
 - Ask students to order the numbers from smallest to largest.
 - Discuss how to determine the order by comparing each number's place values.

Activity 4: Number Line Ordering

1. **Materials:** Number line templates, number cards, markers.
2. **Instructions:**
 - Draw a number line on the board or provide number line templates.
 - Place the given numbers on the number line in the correct order.
 - Have students check their placement and discuss the reasoning behind the order.

4. Practice Problems

1. **Problem 1:** Compare the following pairs of numbers and write the correct symbol ($<$, $>$, $=$):
 - **562** ____ **439**
 - **298** ____ **298**
 - **743** ____ **724**
2. **Problem 2:** Order the following numbers from smallest to largest:
 - **81, 47, 56, 92**
3. **Problem 3:** Write the following numbers in order from largest to smallest:
 - **153, 229, 187, 142**

5. Real-World Applications

Activity: Comparing and Ordering Items

1. **Materials:** Everyday objects (e.g., pencils, books), paper, and pencils.
2. **Instructions:**
 - Use everyday objects to create a set (e.g., pencils with different lengths).
 - Have students compare and order the objects based on length.
 - Discuss how place value helps in real-world situations like measuring and sorting.

Activity: Ordering Students' Ages

1. **Materials:** Paper, pencils.
2. **Instructions:**
 - Have students write their ages on a piece of paper.
 - Order the ages from youngest to oldest.
 - Discuss how comparing and ordering helps in understanding data.

6. Review and Wrap-Up

Key Points to Remember:

- **Comparing Numbers** involves looking at place values to determine which number is greater or smaller.
- **Ordering Numbers** arranges numbers in a sequence from smallest to largest or largest to smallest.
- Understanding place value is crucial in comparing and ordering numbers accurately.

Exit Question: Can you explain how you would compare the numbers **468** and **532** and what method you used to determine which one is greater?