

3rd Grade Math: Understanding Place Value

Lesson Objective:

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

- Identify the place value of digits in a number up to 1,000.
- Read and write numbers in expanded form.
- Compare and order numbers based on place value.

1. Introduction to Place Value

What is Place Value?

- **Place Value** refers to the value of a digit based on its position in a number. For example, in the number **453**, the digit **4** is in the hundreds place, **5** is in the tens place, and **3** is in the ones place.

Place Value Chart:

- **Ones Place:** The value of the digit is its face value (e.g., in 7, the value is 7).
- **Tens Place:** The value of the digit is ten times its face value (e.g., in 30, the value is $3 \times 10 = 30$).
- **Hundreds Place:** The value of the digit is one hundred times its face value (e.g., in 400, the value is $4 \times 100 = 400$).

2. Identifying Place Value

Activity 1: Place Value Chart

1. **Materials:** Place value charts, number cards, and markers.
2. **Instructions:**
 - Display a place value chart with columns for ones, tens, and hundreds.
 - Show a number card (e.g., **347**).
 - Write the number in the chart:
 - **Hundreds:** 3
 - **Tens:** 4
 - **Ones:** 7
 - Discuss the value of each digit and how it contributes to the overall number.

Activity 2: Expanded Form

1. **Materials:** Paper, pencils, and example numbers.
2. **Instructions:**
 - Explain that expanded form shows the value of each digit in a number.
 - Write a number in expanded form (e.g., **253** becomes **$200 + 50 + 3$**).

- Have students practice writing numbers in expanded form with given examples.

3. Comparing and Ordering Numbers

Activity 3: Comparing Numbers

1. **Materials:** Number cards, comparison symbols ($<$, $>$, $=$), paper, and pencils.
2. **Instructions:**
 - Write two numbers on the board (e.g., **423** and **356**).
 - Compare the numbers using place value to determine which is greater.
 - Discuss how to compare numbers by looking at the digits in the hundreds, tens, and ones places.

Activity 4: Ordering Numbers

1. **Materials:** Number cards, paper, and pencils.
2. **Instructions:**
 - Give students a set of numbers (e.g., **124**, **309**, **217**).
 - Have students order the numbers from smallest to largest by comparing place values.
 - Discuss the steps to arrange numbers correctly.

4. Practice Problems

1. **Problem 1:** Write the following numbers in expanded form:
 - **562**
 - **408**
 - **273**
2. **Problem 2:** Identify the place value of each digit in the number **731**:
 - **Hundreds Place**
 - **Tens Place**
 - **Ones Place**
3. **Problem 3:** Compare the following pairs of numbers and write the correct symbol ($<$, $>$, $=$):
 - **452** ____ **389**
 - **674** ____ **674**
 - **801** ____ **910**

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- **452** ____ **389**
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6. Review and Wrap-Up

Key Points to Remember:

- **Place Value** helps us understand the value of digits based on their position in a number.
- **Expanded Form** shows the value of each digit.
- **Comparing and Ordering Numbers** involves looking at place values to determine which numbers are greater or smaller.

Exit Question: Can you explain how place value helps us compare two numbers and give an example?