



The International Number System and Comparison with the Indian System

i. Definition and Explanation

What is a Number System? A number system is a method of writing and reading numbers. While the digits we use (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) are universal, the way we group them to read large numbers can differ. The two most common systems are the Indian System and the International System.

The Indian Number System (Hindu-Arabic System):

This system is primarily used in India, Pakistan, Bangladesh, and Nepal. Its unique feature is that after the 'Thousands' period, place values are grouped in sets of two.

- **Grouping:** We use place values like Lakhs and Crores.
- **Commas:** The first comma is placed after the hundreds place (3 digits from the right). Subsequent commas are placed after every 2 digits.
- **Example:** The number 123456789 is written as 12,34,56,789.

The International Number System

This is the most widely used system around the world (in countries like the USA, UK, Australia, etc.). Its key feature is that place values are consistently grouped in sets of three.

- **Grouping:** We use place values like Millions, Billions, and Trillions.
- **Commas:** Commas are placed after every 3 digits from the right.
- **Example:** The number 123456789 is written as 123,456,789.

ii. Key Points and Important Terms

Feature	Indian Number System	International Number System
Basic Units	Ones, Tens, Hundreds	Ones, Tens, Hundreds
Place Names	Thousand, Lakh, Crore	Thousand, Million, Billion
Comma Rule	First after 3 digits, then every 2 digits. (e.g., 5,43,210)	Every 3 digits from the right. (e.g., 543,210)
Periods	Ones, Thousands, Lakhs,	Ones, Thousands, Millions, Billions



Feature	Indian Number System	International Number System
	Crores	
Feature	Indian Number System	International Number System
Basic Units	Ones, Tens, Hundreds	Ones, Tens, Hundreds

Important Equivalences (The Bridge Between Systems):

- 1 Lakh = 100 Thousand
- 10 Lakhs = 1 Million
- 1 Crore = 100 Lakhs = 10 Million
- 10 Crores = 100 Million
- 100 Crores = 1 Billion

iii. Detailed Examples with Solutions

Let's take the number 458769231 and express it in both systems.

Example 1: Indian System

1. Write the number: 458769231
2. Place commas: Start from the right. First comma after 3 digits (231), next after 2 digits (69), next after 2 digits (87).
 - Result: 45,87,69,231
3. Read the number using the periods (Crores, Lakhs, Thousands):
 - Forty-five Crore, Eighty-seven Lakh, Sixty-nine Thousand, Two Hundred Thirty-one.

Example 2: International System

1. Write the number: 458769231
2. Place commas: Start from the right. Place a comma after every 3 digits.
 - Result: 458,769,231
3. Read the number using the periods (Millions, Thousands):
 - Four Hundred Fifty-eight Million, Seven Hundred Sixty-nine Thousand, Two Hundred Thirty-one.



iv. Summary of Main Concepts

- **Two Systems:** We use the Indian and International systems to read and write large numbers.
- **Core Difference:** The main difference lies in the placement of commas and the names of the place value periods.

Indian System:

- Commas: 3, 2, 2, 2...
- Periods: Lakhs, Crores.

International System:

- Commas: 3, 3, 3...
- Periods: Millions, Billions.

Key Conversions:

- 1 Million = 10 Lakhs
- 1 Crore = 10 Million

Golden Rule: Always look at the commas first to decide which system to use for reading a number. The value of the number itself never changes.