Understanding Numbers (Place Value for Large Numbers)

Place value tells us the value of each digit in a number based on its position.

The value of a digit increases 10 times as we move left.

Example:

In 4,582,

- 4 is in the Thousands place (4,000)
- 5 is in the Hundreds place (500)
- 8 is in the Tens place (80)
- 2 is in the Ones place (2)

1. Indian Place Value System Chart

Period	Places
Crores	Ten Crores, Crores
Lakhs	Ten Lakhs, Lakhs
Thousands	Ten Thousands, Thousands
Units	Hundreds, Tens, Ones

Example:

7,25,468 → Read as Seven Lakh Twenty–Five Thousand Four Hundred Sixty–Eight

2. International Place Value System Chart

Period	Places
Millions	Ten Millions, Millions
Thousands	Hundred Thousands, Ten Thousands, Thousands
Units	Hundreds, Tens, Ones

Example:

7,254,468 → Read as Seven Million Two Hundred Fifty–Four Thousand Four Hundred Sixty–Eight

Expanded Form of Numbers

Writing a number by showing the value of each digit.

Example:

52,318 = 50,000 + 2,000 + 300 + 10 + 8

Comparing Large Numbers

- Compare digit by digit from left to right.
- The number with more digits is larger.
- If digits are the same, compare place by place.

Example:

Which is greater? 6,84,215 or 7,45,189?

• Since 7 > 6, 7,45,189 is greater.

Properties of Place Value

- i. The value of a digit depends on its place in the number.
- ii. As we move left, the place value increases 10 times.
- iii. A number remains the same if we add zeroes at the left (e.g., 005 = 5).
- iv. A number changes if zero is added at the right (e.g., $50 \neq 500$).
- v. The largest 5–digit number is 99,999, and the smallest 6–digit number is 1,00,000.