Class - 7th

Mathematics

Large Number Around us

Short notes

Large Numbers Around Us:

Introduces the concept of large numbers through real-life contexts, math reasoning, and playful curiosity.

- Eshwarappa, a farmer, hears that India once had about 1 lakh (100,000) rice varieties. His children, Roxie and Estu, become curious about what "a lakh" really means.They explore how long it would take to experience all those varieties (e.g., eating one per day would take 274 years). By their examples we learn many facts about large numbers.

- The chapter explores how numbers like a thousand, lakh, and crore fit into everyday contexts (e.g., population, heights of buildings, and seating capacity of stadiums).

- Students learn the Indian vs. International place value systems, including how commas are placed and numbers are read differently. In the Indian system, commas are placed to group the digits in a 3-2-2-2... pattern from right to left (thousands, lakhs, crores, etc.). In the American system, the digits are grouped uniformly in a 3-3-3-3… pattern from right to left (thousands, millions, billions, etc.).

- We came across large numbers — lakhs, crores and arabs; millions and billions. We learnt how to read and write these numbers in the Indian and American/International naming systems.
  (a) 1 lakh is 1 followed by 5 zeroes: 1,00,000
  (b) 1 crore is 1 followed by 7 zeroes: 1,00,00,000
  (c) 1 million is 1 followed by 6 zeroes: 1,000,000 (which is also ten lakhs)
  (d) 1 arab is 1 followed by 9 zeroes: 1,000,000,000 (which is also 100 crore or 1 billion)

- Estimation and Rounding: We generally round up or round down large numbers. Many times it is enough just to know roughly how big or small something is. Examples from population data and daily life help students get a feel for approximation. With large numbers it is useful to know the nearest thousand, lakh or crore.

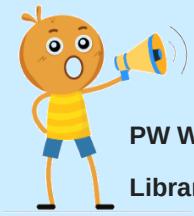
- Tools like special calculators (e.g., +100, +1000 buttons) help students build numbers and understand place value. Ex : Creative Chitti is a different kind of calculator. It has the following buttons: +1, +10, +100, +1000, +10000, +100000 and +1000000. It always has multiple ways of doing things. “How so?”, you might ask. To get the number 321, it presses +10 thirty two times and +1 once. Will it get 321? Alternatively, it can press +100 two times and +10 twelve times and +1 once.

- Estu and Roxie explore puzzles and mental math tricks, such as quick multiplication using place value logic.
  Ex: 72 x 125 =72 x(1000/8)=9000 [Hint: 125 = 1000/ 8]

- The chapter shows patterns in multiplication
  (like 11 x 11 =121
  111 x 111 = 12321
  1111 x 1111 =1234321
  digit counts in products, and interesting math facts (e.g., weights of whales, distance to the Sun).

- To get a sense of large numbers or quantities, we can check how many times bigger they are compared to numbers or quantities that are more familiar.

  We carried out interesting thought experiments such as — "Would one be able to watch 1000 movies in a year?"



PW Web/App - https://smart.link/7wwosivoicgd4

Library- https://smart.link/sdfez8ejd80if