

Based on **GANITA PRAKASH** New NCERT Textbook

Sanjiv[®] *Refresher*

Mathematics

GANITA PRAKASH

For the Student of Class 7

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Publisher : _____



Sanjiv Prakashan, Jaipur



Publisher :

Sanjiv Prakashan

Dhamani Market, Chaura Rasta, Jaipur-3
email : sanjeevprakashanjaipur@gmail.com
website : www.sanjivprakashan.com



© Publisher



Laser Typesetting :

Sanjiv Prakashan (DTP Department),

Jaipur

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Contents

Chapter 1. Large Numbers Around Us	1
Chapter 2. Arithmetic Expressions	37
Chapter 3. A Peek Beyond the Point	66
Chapter 4. Expressions Using Letter-Numbers	122
Chapter 5. Parallel and Intersecting Lines	159
Chapter 6. Number Play	190
Chapter 7. A Tale of Three Intersecting Lines	225
Chapter 8. Working with Fractions	268

Large Numbers Around Us

1.1 A Lakh Varieties!

Facts

1. Earlier our country had about **a lakh** varieties of rice. Farmers used to preserve different varieties of seeds and use them to grow rice. Now we only have a handful of varieties.

Intext Question

Page 1

Q. 1. If we tried a new variety each day, would we even come close to tasting all the varieties in a lifetime of 100 years? What do you think? Guess.

Solution : Number of days in a year (ignoring leap years) = 365

Number of varieties of rice in our country

= One lakh

= 1,00,000

Number of varieties of rice we would taste in a lifetime of 100 years

= 365×100

= 36500 ($< 1,00,000$)

So, we would come nowhere close to tasting all the varieties in a lifetime of 100 years.

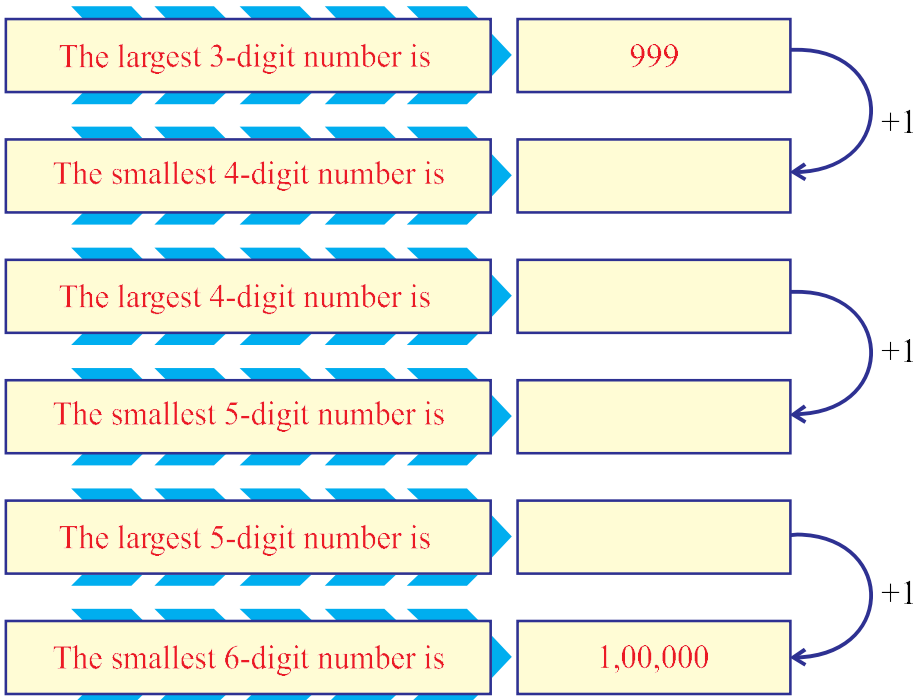
Facts

1. 1,00,000 is read as “one lakh”.
2. Number of days in a year is 365.
3. If we live for y years, the number of days in our lifetime will be $365 \times y$.

Intext Questions

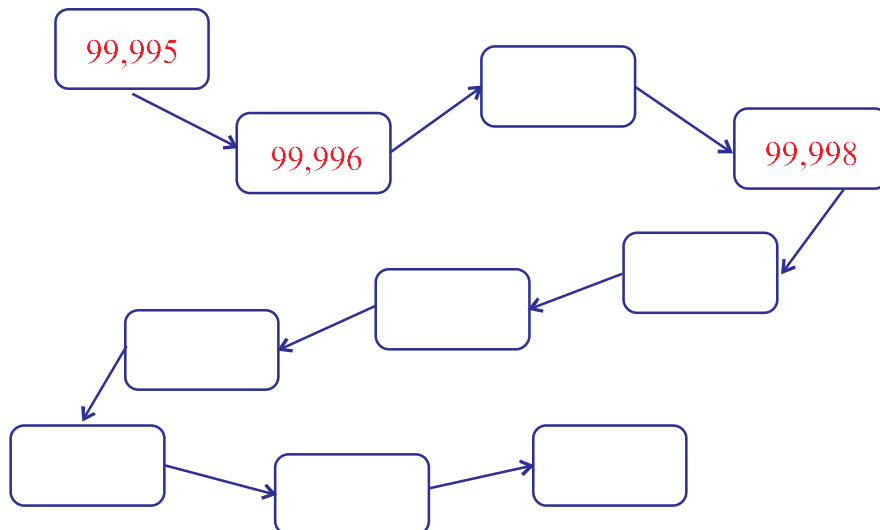
Page 2

Q. 1. Observe the pattern and fill in the boxes given below.

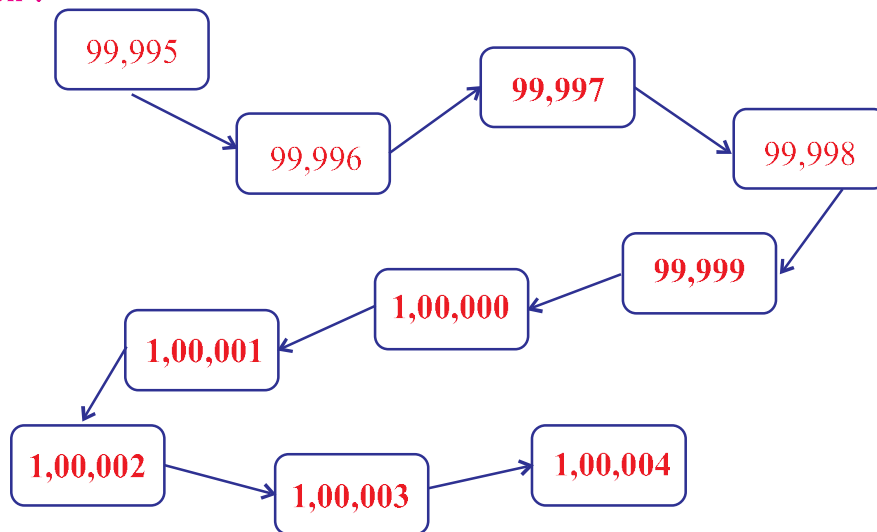


Solution : The largest 3-digit number is 999.
The smallest 4-digit number is $999 + 1 = \mathbf{1000}$.
The largest 4-digit number is **9999**.
The smallest 5-digit number is $9999 + 1 = \mathbf{10,000}$.
The largest 5-digit number is **99999**.
The smallest 6-digit number is $99999 + 1 = 1,00,000$.

Q. 2. Fill in the boxes.



Solution :



Q. 3. What if we ate 2 varieties of rice every day? Would we then be able to eat 1 lakh varieties of rice in 100 years?

Solution : Number of days in a year (ignoring leap years) = 365

Number of varieties of rice we would be able to eat in 100 years if we ate 2 varieties of rice everyday

$$\begin{aligned}
 &= 365 \times 2 \times 100 \\
 &= 730 \times 100 \\
 &= 73000 (< 1,00,000)
 \end{aligned}$$

So, we would be able nowhere to eat 1 lakh varieties of rice in 100 years.

Q. 4. What if a person ate 3 varieties of rice every day? Will they be able to taste all the lakh varieties in a 100 years lifetime? Find out.

Solution : Number of varieties of rice they would be able to eat in a 100 year lifetime if they ate 3 varieties of rice everyday

$$\begin{aligned}
 &= 365 \times 3 \times 100 \\
 &= 1095 \times 100 \\
 &= 1,09,500 (> 1,00,000)
 \end{aligned}$$

So, they would be able to taste all the lakh varieties in a 100 year lifetime.

Intext Question

Page 3

Q. 1. Choose a number for y . How close to one lakh is the number of days in y years, for the y of your choice?

Solution : $\because$ Number of days in a year = 365 (if we ignore leap years)

$\therefore$ Number of days in y years = $365 \times y$
 $= 365y$

One lakh = 1,00,000

Let us choose a number

$y = 274$

$$\begin{aligned}\text{Then, number of days in } y \text{ years} &= 365 \times 274 \\ &= 1,00,010\end{aligned}$$

$$1,00,010 - 1,00,000 = 10$$

Thus, the number of days in 274 years is close to one lakh by an excess of 10 days only.

Figure it Out

Page 3

Q. 1. According to the 2011 Census, the population of the town of *Chintamani* was about 75,000. How much less than one lakh is 75,000?

Solution : One lakh = 1,00,000

$$\begin{array}{r} 1,00,000 \\ (-) 75,000 \\ \hline 25,000 \end{array}$$

So, 75,000 is less than one lakh by 25,000.

Q. 2. The estimated population of *Chintamani* in the year 2024 is 1,06,000. How much more than one lakh is 1,06,000?

Solution : One lakh = 1,00,000

$$\begin{array}{r} 1,06,000 \\ (-) 1,00,000 \\ \hline 6,000 \end{array}$$

So, 1,06,000 is more than one lakh by 6,000.

Q. 3. By how much did the population of *Chintamani* increase from 2011 to 2024?

Solution : Population of *Chintamani* in 2011 = 75,000

Population of *Chintamani* in 2024 = 1,06,000

$$\begin{array}{r} 1,06,000 \\ (-) 75,000 \\ \hline 31,000 \end{array}$$

So, the population of *Chintamani* increased from 2011 to 2024 by 31,000.

Getting a Feel of Large Numbers

Facts

1. The world's tallest statue is the 'Statue of Unity' in Gujarat depicting Sardar Vallabhbhai Patel. Its height is about 180 metres.
2. Kunchikal waterfall in Karnataka is said to drop from a height of about 450 metres.
3. We can get a better sense of the size of any measurement by comparing it with something familiar.

Intext Question

Page 3

Q. 1. Look at the picture on the right. Somu is 1 metre tall. If each floor is