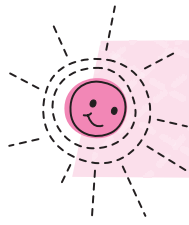


INDEX

1. Large Numbers	5
Indian Number System International Number System	
Comparison of two systems Rounding Off and Roman Numerals	
Excercise	
2. The Four Fundamental Operations	14
Addition Subtraction Multiplication Division	
Mixed Bag Bodmas and Unitary Method	
Excercise	
3. Factors And Multiples	23
Factors and Multiples Prime Factorisation	
HCF and LCM Divisibility Rules	
Excercise	
Practice Excercise 1	31
4. Fractions	34
Understanding Fractions	
Addition and Subtraction of Fractions	
Problem Solving: Addition and Subtraction of Fractions	
Multiplication of Fractions Division of Fractions	
Problem Solving: Multiplication and Division of Fractions	
Mental Math with Fractions	
Excercise	
5. Decimals	43
Understanding Decimals Addition & Subtraction of Decimals	
Multiplication of Decimals Division of Decimals	
Mental Math with Decimals	
Excercise	
6. Algebra	51
Introducing Variables and Constants Algebraic Expressions	
Introducing Equations Excercise	
Practice Excercise 2	59

7. Geometry	61
• Basic Geometrical Concepts • Angle Measurements	
• Types of Lines • Polygons and Circles	
• Exercise	
8. Perimeter, Area and Volume	67
• Perimeter • Area • Volume	
• Exercise	
9. Measurements	73
• Metric System • Estimation with Metric	
Measures • Temperature	
• Exercise	
Practice Exercise 3	78
10. Money	80
• Bills • Profit and Loss	
• Exercise	
11. Percentage	83
• Fractions and per cents, Decimals and per cents	
• Finding Percentages • Profit and Loss using Simple Percentage	
• Exercise	
12. Time	88
• Conversion of Units • Addition and Subtraction with Time	
• Introducing Maps • Exercise	
13. Data Handling	95
• Average/Mean • Tally Chart • Circle Graph • Bar Graph	
• Line Graph • Exercise	
14. Logical Reasoning	107
Practice Exercise 4	111
Model Question Paper 1 for Olympiad and NTSE	115
Model Question Paper 2 for Olympiad and NTSE	121



1. Large Numbers



Indian Number System

EXERCISE 1.1

1. Complete the given table. First one has been done for you:

Numbers	Place Commas as per Indian Number System	Expanded Form of the Given Number	Place Value of Underlined Digit
611 <u>2</u> 13	6, 11, 213	$6,00,000 + 10,000 + 1,000 + 200 + 10 + 3$	200
78 <u>1</u> 0218			
8 <u>8</u> 10028			
<u>1</u> 10112			
12718 <u>9</u> 9			
267 <u>8</u> 09			
8 <u>1</u> 9999			
<u>7</u> 86600			

2. Write the given numerals in words:

a. 23,45,100 _____

b. 3,22,222 _____

c. 1,10,210 _____

3. Arrange in descending order:

a. 2,34,900 2,10,100 34,45,800 9,89,999 21,11,111



b. 1,11,111 10,11,111 1, 21,211 19,19,199 2,11,111

c. 23,23,233 43,43,433 87,88,888 9,99,999 8,88,888

4. Count in lakhs:

a. 8,87,123; 9,87,123 ; _____ ; _____

b. 11,10,100; _____ ; _____ ; _____

c. 5,15,100; _____ ; _____ ; _____

5. Fill in the blanks:



a. Place value and face value of a number is always equal at _____



b. Place value of a digit increases by _____ times as it moves place by place from right to left.



6. Make the smallest 6 digit number using 3, 6, 7, 9, 0 and 2. _____



7. Some Facts about Pre-historic Men

i. **Handy Man:** According to the fossils evacuated, he is 16 to 18 lakhs years old First Man. He was tool-maker and he used to move erect and was omnivorous.

ii. **Erect Man (Home Erectus):** This fossil is known as “Java Ape Man”. He was evacuated from 17 lakhs years old Pliestocene, Java. He was able to lit fire and used to live in small groups in caves.

a. Do you know how we can write 16 lakhs in numerals? Write it here.

b. What is a number before 16 lakhs? Write in numerals. _____

c. What is ten thousands after 18 lakhs? Write in numerals. _____



- d. What is the face value of 7 in 17 lakhs? _____
- e. What is the place value of 1 in 16 lakhs? _____
- f. Write 18 lakhs in expanded form. _____
- g. What is the predecessor of 17 lakhs? _____
- h. What is the successor of 17 lakhs? _____
- i. 18 lakhs come between which two numbers? _____
 _____ and _____
- j. What is 84 thousands after 16 lakhs? _____

International Number System

EXERCISE 1.2

1. Complete the given table. First one has been done for you:

Numbers	Place Commas as per International Number System	Expanded Form of the Given Number	Place Value of Underlined Digit
611 <u>2</u> 13	611, 213	600,000 + 10,000 + 1,000 + 200 + 10 + 3	200
58101 <u>1</u> 8			
4 <u>4</u> 10024			
17 <u>1</u> 167			
<u>8</u> 718904			
67820 <u>9</u>			
90 <u>1</u> 999			
20 <u>8</u> 660			

2. Write the given numerals in words:

- a. 9,298,100 _____
- b. 922,987 _____
- c. 6,710,210 _____
- d. 3,123,498 _____
- e. 585,975 _____


3. Arrange in descending order:

- a. 734,900 510,100 3,945,800 1,989,999 1,211,111

- b. 111,111 1,011,111 7,121,211 8,919,199 8,211,111

- c. 1 million 10 thousand 10 million 100 thousand

4. True or False:

- a. 6,000,000 is greater than 600 thousands. _____
- b. The expanded form of 5,675,673 is $5,000,000 + 600,000 + 70,000 + 5,000 + 600 + 70 + 3$. _____
- c. The face value of 1 in 7,100,806 is 100,000. _____
- d. The place value of 6 in 7,100,806 is 6. _____
- e. There are 6 hundreds in 6,000,000. _____
-  f. 789,899 is smaller than 7 thousand eighty nine thousand, eight hundred ninety-nine. _____
- g. The place value of 7 in 7,899,899 is same as the place value of 7 in 1,785,000.
