



SUBJECT:- MATHEMATICS

CHAPTER:- WHOLE NUMBERS (PART – 1)

STEP 1:- GUIDELINES AND INTRODUCTION

GUIDELINES:

Dear students,

Kindly refer to the following notes/video links from the Chapter- “WHOLE NUMBERS PART-1 ” and thereafter do the questions in your math notebook.

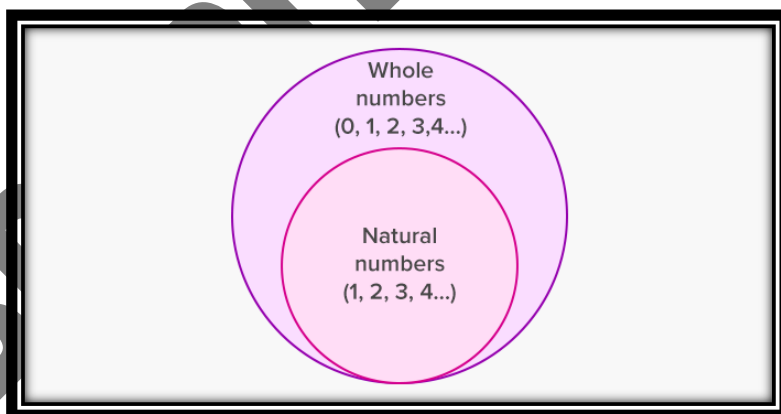
LINK FOR THE CHAPTER:- <http://ncert.nic.in/textbook/textbook.htm?femh1=2-14>

INTRODUCTION:

The numbers 1,2, 3, are called natural numbers or counting numbers.

Let us add one more number i.e., zero (0), to the collection of natural numbers. Now the numbers are 0,1,2, ... These numbers are called whole numbers.

We can say that whole nos. consist of zero and the natural numbers. Therefore, except zero all the whole nos. are natural numbers.



Facts of Whole numbers-

- 1) The smallest natural number is 1.
- 2) The number 0 is the first and the smallest whole number.
- 3) There are infinitely many or uncountable number of whole-numbers.
- 4) All natural numbers are whole-numbers.
- 5) All whole-numbers are not natural numbers. For example, 0 is a whole-number but it is not a natural number.
- 6) Every whole number has a successor. Every whole number except zero has a predecessor.
- 7) All natural numbers are whole numbers, but all whole numbers are not natural numbers.

STEP 2:- SUBTOPICS

- ❖ Introduction to whole numbers
- ❖ Successor and predecessor
- ❖ Properties of whole number
 - Closure property:
For addition
For multiplication
 - Commutative property:
For addition
For multiplication

STEP 3:- KEY POINTS:

- ❖ Whole numbers
(refer to the link- <https://www.youtube.com/watch?v=RAafwNlguw>)

The set of counting numbers and zero are known as whole numbers. Whole numbers are 0, 1, 2, 3, 4, 5, 6, 7,..... and so on.

- ❖ Successor and Predecessor
(refer to the link- <https://www.youtube.com/watch?v=iBW6vPcd2RQ>)

The number which comes before the given number is known as predecessor.

Since 0 is the first whole number it does not have a predecessor which is a whole number.

The number which comes after the given number is known as successor.

- ❖ Properties of a Whole number-
 - Closure property:
(Refer to the link- https://www.youtube.com/watch?v=tsqZ_U6Nw6I ; watch the video from 0:00-2:33 and 4:33-5:53)

For addition:

For any two whole numbers a and b, their sum $a + b$ is always a whole number.

E.g. $12 + 45 = 57$

12, 45 and 57 all are whole numbers.

For multiplication:

For any two whole numbers a and b, their product $a \times b$ is always a whole number.

E.g. $12 \times 7 = 84$,

12, 7 and 84 all are whole numbers

- Commutative property:
(Refer to the link- <https://www.youtube.com/watch?v=-ngyOORM-7g> ; watch the video from 0:00-3:02 and 3:53-4:31)

For addition:

For any two whole numbers a and b , $a + b = b + a$
We can add any two whole numbers in any order.
E.g $12 + 45 = 45 + 12$

For multiplication:

For any two whole numbers a and b , $a \times b = b \times a$
Order of multiplication is not important.
E.g $11 \times 6 = 66$ and $6 \times 11 = 66$
Therefore, $11 \times 6 = 6 \times 11$

STEP 4 :- POINTS TO REMEMBER-

- ❖ Adding two whole numbers always gives a whole number. Similarly, multiplying two whole numbers always gives a whole number. We can say that whole numbers are closed under addition and also under multiplication.
- ❖ You can add two whole numbers in any order. You can multiply two whole numbers in any order. We can say that addition and multiplication are commutative for whole numbers.

ASSIGNMENT :-

(EXERCISE - 2.1 from N.C.E.R.T and extra questions to be done in notebook and read example.)

Extra Questions

Q.1. Predecessor of :

(a) 2340 is _____ (b) 25621 is _____

Q.2. Successor of :

(a) 21029 is _____ (b) 7810 is _____

Q.3. Match the following :

- | | |
|---|------------|
| (i) Predecessor of smallest 5-digit number | (a) 100000 |
| (ii) Successor of largest 5-digit number | (b) 1000 |
| (iii) Successor of largest 3-digit even number | (c) 9999 |
| (iv) Predecessor of smallest 4-digit odd number | (d) 999 |

Q.4. Write the smallest 3-digit number which will not change on reversing the digits.

Q.5. The difference of smallest 3-digit number and its predecessor is _____ .

Q.6. Write 'True' or 'False' for the following statements :

- (i) The product of two odd numbers is always odd.
- (ii) The product of two even numbers is always even.
- (iii) The sum of two odd numbers is always odd.
- (iv) The difference of one even and one odd number is always even.
- (v) The difference of two odd numbers is always even.

BBPS, PITAM PURA