

Chapter 3 - Whole NumbersExercise 3.1

Q.1 Write down the smallest natural number.

Ans: 1

Q.2 Write down the smallest whole number.

Ans '0' is smallest whole number.

Q.3 Write down, if possible the largest natural number

Ans: Does not exist

Q.4 Write down if possible, the largest whole number.

Ans Does not exist.

Q.5 Are all natural numbers also whole numbers?

Ans Yes.

Q.6 Are all whole numbers also natural numbers.

Ans No, 0 is whole number but not a natural number.

Q.7 Give successor of each of the following number

(i) 1000909

(ii) 2340900

(iii) 7039999

(2)

Solution (i) Successor of 1000909

$$= 1000909 + 1 = 1000910$$

(ii) Successor of 2340900 is $2340900 + 1$
 $= 2340901$

(iii) Successor of 7039999 = $7039999 + 1$
 $= 7040000$

Q.8 Write down Predecessor of each of the following whole numbers.

(i) 10000

(ii) 807000

(iii) 7005000

Solution (i)

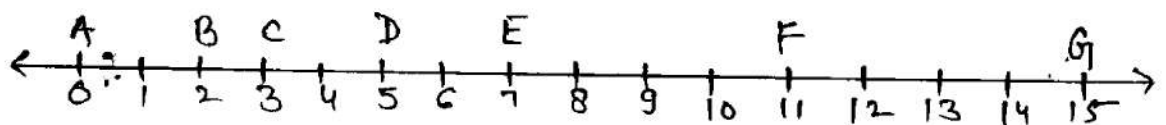
Predecessor of 10000 = $10000 - 1 = 9999$

(ii) Predecessor of 807000 = $807000 - 1 = 806999$

(iii) Predecessor of 7005000 = $7005000 - 1 = 7004999$

Q.9 Represent the following numbers on number line.
 2, 0, 3, 5, 7, 11, 15

Solution:



(3)

Q.10 How many whole numbers are there between 21 and 61.

Ans: 22, 23, 24, 25, - - - - - up to 60
Total 39 whole numbers are there.

Q.11 Fill in the blanks with the appropriate $<$ or $>$.

(i) 25 - - - 205 (ii) 170 - 107 (iii) 415 - 514
(iv) 1001 - 100001 (v) 2300014 - 2300041

Solution: (i) $25 < 205$ (ii) $170 > 107$
(iii) $415 < 514$ (iv) $1001 < 100001$
(v) $2300014 < 2300041$

Q.12 Arrange the following numbers in descending order.

925, 786, 1100, 141, 325, 886, 0, 270

Solution: Descending order is as follows

1100, 925, 886, 786, 325, 270, 141, 0

Q.13 Write the largest number of 6 digits and the smallest number of 7 digits. Which one of these two is larger and by how much.

(4)

Solution : largest number of 6 digits = 999999

Smallest number of 7 digits = 1000000

As a number having more digits is always greater, therefore, 1000000 is greater than 999999

also, 1000000 is greater than 999999 by 1.

Q.14 Write down three consecutive whole numbers just preceding 8510001.

Solution : Required numbers are

$$8510001 - 1 = 8510000$$

$$8510001 - 2 = 8509999$$

$$8510001 - 3 = 8509998$$

Q.15 Write down the next three consecutive whole numbers starting from 4009998.

Solution : Required numbers are:

$$4009998 + 1 = 4009999$$

$$4009998 + 2 = 4010000$$

$$4009998 + 3 = 4010001$$

Q.16 Give Argument in support of the statement that there does not exist the largest natural number

Sol : As every natural number has its successor, so largest natural number does not exist.

Q.17 Which of the following statements are true and which are false. (5)

- (i) Every whole number has its successor.
- (ii) Every whole number has its predecessor.
- (iii) 0 is the smallest natural number.
- (iv) 1 is the smallest whole number.
- (v) 0 is less than every natural number.
- (vi) Between any two whole numbers there is a whole number.
- (vii) Between any two non consecutive whole numbers there is a whole number.
- (viii) The smallest 5 digit number is the successor of the largest 4 digit number.
- (ix) Of the given two natural numbers, the one having more digits is greater.
- (x) The predecessor of a two digit number can not be a single digit number.
- (xi) If a and b are natural numbers ($a > b$), then there is a natural number c such that $a < c < b$.
- (xii) If a and b are whole numbers, $a < b$ then $a+1 < b+1$.
- (xiii) The whole number 1 has 0 as predecessor.
- (xiv) The natural number 1 has no predecessor.

Solution (i) T (ii) F (iii) F (iv) F (v) T
(vi) F (vii) T (viii) T (ix) T (x) F (xi) F
(xii) T (xiii) T (xiv) T