

Practice set-I

Set

1. If $P = \{\text{prime numbers less than } 10\}$ and $F = \{\text{Factors of } 12\}$

- Express set P and F in listing method.
- Set P is finite or infinite set? Give reason.
- State the relation between P and F .
- What is the Cardinal number set P ?
- Combine set P and F . Also represent in diagram.

2. $B = \{\text{letters of the word 'ball'}\}$ and $C = \{\text{letters of the word 'call'}\}$ are two given sets.

- List the elements of set B and C .
- What is Cardinal number of set B and C .
- Are the sets B and C equal or equivalent? Give reason.
- Are the sets B and C overlapping or disjoint? Give reason?
- Represent common elements of set B and C in venn diagram.

3. List the elements of following sets and answer the questions -

$N = \{\text{natural numbers less than } 10\}$

$C = \{\text{letters of the word 'apple'}\}$

$D = \{x : x \text{ is a square number, } x < 75\}$

$A = \{x : x \text{ is a natural number less than } 1\}$

$S = \{\text{Composite numbers between } 20 \text{ and } 50\}$

$P = \{\text{Prime numbers between } 70 \text{ and } 100\}$

$F = \{\text{Factors of } 24\}$

i) What is the cardinality of set A ?

ii) What type of set is set A ?

iii) Combine set N and F . Also represent in diagram.

iv) Write common elements of set N and F . Also represent in venn-diagram.

v) State the relation between set P and E with reason.

Operation on Whole Numbers

(Group 'A')

Very short:

1. a) How many lakhs are there in 10 million?
b) How many crore are there in 1 arab?
c) How many millions are there in 1 crore?
d) How many thousand are there in 1 million?

2. a) Expand: i) 7430896 ii) 5003907854

b) Greatest and smallest number formed by:

- i) 3, 0, 5, 9, 0, 1 ii) 5, 1, 9, 0, 0, 5, 6

c) If 'x' is at hundreds place 'y' is at tens place and 'z' is at ones place, write the number formed by these digits.

d) Write place and place value of underlined digits.

- i) 2470059 ii) 530479608

e) Make mathematical expression and simplify:

- i) 9 is subtracted from the sum of 7 and 5.
ii) 4 is added to the quotient of 55 and 11.
iii) The quotient of 72 divided by the product of 2 and 4.

f) Rewrite the following Numerals in Devanagari and also write number names.

- i) 7438091 ii) 50048906

9. Write number name as mentioned in a bracket.

i) 24030054 (National)

ii) 576340004 (International)

Group 'B'

1. a) Find the sum of smallest and greatest numbers formed by 4 digits.

b) The cost of construction of a road and footpath is 24,60,37,596 and 50,29,973 respectively

i) Represent cost of construction in place value chart according to international place value system and also write the number name.

ii) Find the sum and the difference of place value of 5 on both numerals.

iii) How much more cost is required to construct road than its footpath?

2. Subham buys 10 kg of rice at Rs 60 ^{per kg} ~~each~~ and 2 kg of sugar at Rs 95 per kg.

i) Write mathematical expression and simplify:

ii) If Subham given Rs 1000 rupee note How much money he will get back?

3. Simplify: $24 \div 2 [70 \div 5 \{4 + (12 - 18 \div 6 \times 3)\}]$

4. If there are two basket each containing 18 apples.

10 apples are rotten and not fit for eating. If you add 4 more apples and divided among 6 friends, How many will each receive?