

14/10/21
13/10/21

Ex-10(D)



1) State whether the given set is infinite or finite:

- i) $\{3, 5, 7, \dots\}$ - Infinite
- ii) $\{1, 2, 3, 4\}$ - Finite
- iii) $\{\dots, -3, -2, -1, 0, 1, 2\}$ - Infinite
- iv) $\{20, 30, 40, 50, \dots, 200\}$ - Finite
- v) $\{7, 14, 21, \dots, 240\}$ - Finite

2) Which of the following sets is empty?

i) Set of counting numbers between 5 and 6.

empty set

ii) Set of odd numbers between 7 and 19.

Not an empty set

iii) Set of odd numbers between 7 and 9.

~~Not an empty set~~ empty set

iv) Set of even numbers that are not divisible by 2.

empty set

v) $\{0\}$.

not an empty set

3) State which pairs of sets given below are equal

sets and which are equivalent:

i) $\{3, 5, 7\}$ and $\{5, 3, 7\}$

Equal set

ii) $\{8, 6, 10, 12\}$ and $\{3, 2, 4, 6\}$

Equivalent set

iii) $\{7, 7, 2, 1, 2\}$ and $\{1, 2, 7\}$

Equal set

iv) $\{2, 4, 6, 8, 10\}$ and $\{a, b, d, e, m\}$

Equivalent set

Q) State which of the following are finite sets

and which are infinite:

i) Set of integers - Infinite

ii) $\{\text{Multiples of } 5\}$ - Infinite

iii) $\{\text{Ratios between } 1 \text{ and } 2\}$ - Infinite

iv) $\{\text{Number of people in India}\}$ - Infinite

v) Set of trees in the world - Infinite

vi) Set of leaves on a tree - Infinite

8) For each statement, given below, write True or False:

- i) False
- ii) False
- iii) True
- iv) True
- v) True
- vi) False
- vii) True
- viii) False

9) State, giving reasons, which of the following pairs of sets are disjoint sets and which are overlapping sets:

- i) Disjoint sets; as no girl can be age below 15 years and also above 15 years
- ii) Overlapping sets; as boys above 27 years are also above 20 years.
- iii) Overlapping sets; as natural numbers from 50 to 59 are common to both the sets.
- iv) Overlapping sets; as students of class IX studying in I, C.S.E. board are common.
- v) Overlapping sets; as natural number 29 is common to both the sets.
- vi) Disjoint sets; as no letter is common of both the sets.