

13.04.2021
CW
Ex - 10 (D)

1. State whether 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

2. Which of the following sets is empty?

i) Set of counting nos. between 5 and 6

Ans = \emptyset i.e. $\{\}$

ii) Set of odd nos. between 7 and 19:

Ans not empty

iii) Set of odd nos. between 7 and 9.

Ans = \emptyset i.e. $\{\}$

iv) Set of even nos. which is not divisible by 2

Ans = \emptyset i.e. $\{\}$

v) $\{0\}$. Ans = Not empty

13.07.2021
HW
3. State which pair of sets given below are equal and which are equivalent:

i) $\{3, 5, 7\}$ and $\{6, 3, 7\}$

Ans- As the no. of elements ^{and} the elements themselves are same they are both equal and equivalent set.

ii) $\{8, 6, 10, 12\}$ and $\{8, 2, 4, 6\}$
Ans- Equivalent set

iii) $\{7, 7, 2, 12\}$ and $\{1, 2, 7\}$
Ans- Equal sets.

iv) $\{2, 4, 6, 8, 10\}$ and $\{a, b, d, e, m\}$
Ans- Equivalent sets.

4. State which are finite sets and which are infinite:

i) $\{\text{Set of integers}\} = \text{Infinite}$

ii) $\{\text{Fraction between 1 and 2}\} = \text{Infinite}$

iii) $\{\text{Multiples of 5}\} = \text{Infinite}$

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

v) $\{\text{Set of trees in the world}\} = \text{Infinite}$

vi) $\{\text{Set of leaves on a tree}\} = \text{Infinite}$

vii) $\{\text{Set of children in all school of Delhi}\} = \text{Infinite}$

viii) $\{-4, -2, 0, 2, 4, 6, 8\} = \text{Infinite}$

12) $\{-12, -9, -6, -3, 0, 3, 6, 9, 12, \dots\}$ is a sequence

*) No of points in a segment $[a, b]$ is $b - a + 1$ for finite

Q State whether or not the following are empty

i) Prime no. divisible by 2? Yes No

ii) Negative natural nos.? No Yes, Empty

iii) Women in height five meters? No, Empty

iv) Integers less than 5? No

v) Prime nos. between 17 and 20? No

vi) Set of even nos. not divisible by 2? Yes, Empty

vii) Set of multiples of 3 that are more than 9 and less than 18? No

Q State the pairs are equal or equivalent set.

i) $\{\text{Natural nos. less than 5}\}$ and $\{\text{letters of the word 'BOAT'}\}$
Ans - Equivalent set

ii) $\{2, 4, 6, 8, 10\}$ and $\{\text{even natural nos. less than 12}\}$
Ans - Equal set

iii) $\{1, 3, 5, 7, \dots\}$ and $\{ \text{set of odd natural nos.} \}$

Ans- Equal set

iv) $\{ \text{letters of the word 'MEMBER'} \}$ and $\{ \text{letter of the word 'REMEMBER'} \}$

Ans- Equivalent Set

v) $\{ \text{Negative natural nos.} \}$ and $\{ \text{50th day of a month} \}$

Ans- Equal set

vi) $\{ \text{Even natural nos.} \}$ and $\{ \text{odd natural nos.} \}$
Ans- equivalent set

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19.9.21

