13/07/21

Ex-10(D)

1) State whether the given set is ifinite or finit:

i) $\{3, 5, 7, \ldots\ldots\}$ - Infinite

ii) $\{1, 2, 3, 4\}$ - Finite

iii) $\{\ldots\ldots -3, -2, -1, 0, 1, 2\}$ - Infinite

iv) $\{20, 30, 40, 50 \ldots\ldots, 200\}$ - Finite

v) $\{7, 14, 21 \ldots\ldots\ldots\ldots, 2401\}$ - 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.

empty set

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

empty set

v) $\{0\}$.

not an empty set

3) State which paire of sets given below are equal sets and which are equivalent :

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

Equal set

ii) {8,6,10,2} 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

4) State which of the following are finite sets and which are infinite:

i) Set of integers - Infinite

ii) {Multiples of 5} - Infinite

iii) {Fractions between 1 and 2} - Infinite

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

c) State which of the following are finite sets and which are infinite:

i) Set of integers - Infinite

ii) {Multiples of 5} - Infinite

iii) {Fractions between 1 and 2} - Infinite

iv) {Number of people in India} - Infinite

v) Set of trees in the world - Infinite

vi) Set of leaves on a tree - Infinite

vii) Set of children in all schools of Delhi - Infinite

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

ix) $\{-12, -9, -6, -3, 0, 3, 6, \ldots\ldots\}$ - Infinite

x) {Number of points in the line segment 4 cm long} - Infinite

5) State whether are not the following sets are empty:

i) {Prime numbers divisible by 2} - not empty

ii) {Negetive natural numbers} - empty

iii) {Women with height 5 metres} - empty

iv) {Integers less than 5} - not empty

v) {Prime numbers between 17 and 23} - not empty

vi) Set of even number not divisible - Empty

vii) Set of multiples of 3 that are more than 9 and less than 15. - Not empty

6) State if the given pairs of sets are equal sets or equivalent sets:

i) {Natural numbers less than five} and {Letters of the word 'BOAT'}.

Equivalent set

ii) {2, 4, 6, 8, 10} and {even natural numbers less than 12}.

Equal set

iii) {1, 3, 5, 7, ...} and set of odd natural numbers.

Equal set

iv) {Letters of the word MEMBER} and {Letters of the word 'REMEMBER'}

Equal set

v) {Negative natural numbers} and 50th day of a month}.

Equal set

vi) Equivalent set

7) State, whether the following are finite or infinite sets:

i) Finite iii) Finite v) Infinite

iv) {Letters of ... of the word {REMEMBER}

Equal set

v) {Negative natural numbers}, and 50th day of a month}.

Equal set

vi) Equivalent set

3. State, whether the following are finite or infinite sets:

i) Finite
ii) Infinite
iii) Finite
iv) Finite
v) Infinite
vi) Finite

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 24 is common to both the sets.

vi) Disjoint sets; as no letter is common of both the sets.