

H.W

15-07-2021

EX-10 D

i) Set $\{3, 5, 7, \dots\}$ is infinite

ii) Set $\{1, 2, 3, 4\}$ is finite

iii) Set $\{\dots, -3, -2, -1, 0, 1, 2\}$ is infinite

iv) set $\{20, 30, 40, 50, \dots, 200\}$ is ~~not~~ finite.

v) set $\{7, 14, 21, \dots, 2401\}$ is finite

#(2) i) We know that, there is no counting no. between 5 and 6. Hence, the given set is empty.

ii) There are elements in the set of odd no.s between 7 and 9.
Hence, the given set is not empty.

iii) We know that, there is no odd no. between 7 and 9.
Hence, the given set is empty.

iv) We know that, there is no even no. that is not divisible by 2.
Hence, the given set empty.

v) We find one element in the given set.
Hence, the given set ~~is~~ is not empty.

(3) i) Given sets
 $\{3, 5, 7\}$ and $\{5, 3, 7\}$
The elements are same in both the sets.
Hence, the given pair of sets is equal.

ii) Given sets
 $\{9, 6, 10, 12\}$ and $\{3, 2, 4, 6\}$
The elements of both the sets are different but ~~the~~ the no. of elements is same.

Hence, the given pair of sets is equivalent

iii) Given sets

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

The elements are same in both the sets

Hence, the given pair of sets is equal

iv) Given sets

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

The ~~elements~~ elements of both the sets are different but ~~the~~ no. of elements is same

Hence, the given pair of sets is equivalent

v) Given sets

$\{5, 5, 2, 4\}$ and $\{5, 4, 2, 2\}$

The elements are same in both the sets. Hence, the given pair of sets is equal.

(9) i) We know, integers are infinite
Hence, set of integers are infinite

ii) We know, multiple of 5 are infinite
Hence, set $\{\text{multiple of } 5\}$ is infinite

iii) There are infinite no. of fractions between 1 and 2
Hence, set $\{\text{Fraction between 1 and 2}\}$ is infinite.

iv) There is finite no. of ~~trees~~^{people} in ~~world~~^{India}
Hence, set of ~~trees~~^{people} in $\{ \text{No. of people in India} \}$ is finite

v) There are ~~an~~ infinite no. of trees in world
Hence, set of trees in world is infinite.

ii) The no. 2 is a prime no. and also divisible by 2
Hence, set $\{ \text{prime no.s divisible by 2} \}$ is not empty

iii) There are no women with height 5 metre
The natural no. starts from 1
Hence, set $\{ \text{women with height 5 metre} \}$ is empty

ii) the natural no. no.s starts from 1
Hence, set $\{ \text{Negative natural no.s} \}$ is empty

ii) There are ~~no~~ integers less than 5
Hence, set $\{ \text{Integers less than 5} \}$ is not empty

v) There are prime no.s between 17 and 23
Hence, set $\{ \text{Prime no.s between 17 and 23} \}$ is not empty.