

Ex-10 D

1. State whether infinite or finite sets.

- (i) $\{3, 6, 7, \dots\}$ 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. (i) Set of counting numbers between 5 and 6.
Empty set

(ii) Set of odd numbers between 7 and 9.

(iii) Set of odd numbers between 7 and 9.

Empty set

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

(v) $\{0\}$ Empty set

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

(i) $\{3, 5, 7\}$ and $\{5, 3, 7\}$ equal sets

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

equivalent sets

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

Equal sets

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

Equivalent sets

9. State which of the following are finite sets and which are infinite sets.

- (i) Set of integers - Infinite
- (ii) { multiples of 5 } Infinite
- (iii) { Fractions between 1 and 2 } Finite
- (iv) { Numbers of people in India } Finite
- (v) { Set of trees in world } Infinite
- (vi) { Set of leaves on a tree } Infinite
- (vii) { Set of children in all the schools of Delhi }
Ans = finite
- (viii) { ... -4, -2, 0, 2, 4, 6, 8 } Infinite
- (ix) { ... -12, -9, -6, -3, 0, 3, 6, ... } Infinite
- (x) { Number of points in a line of 4 cm long }
Finite.

Ex-10(E)

2. Given

A = { Natural numbers less than 10 }

B = { Letters to the word 'PUPPET' }

C = { Squares of the first four whole numbers }

D = { Odd numbers divisible by 2 }

(i) $n(A) = 9$

3. State true or false for each of the following wrong statement.

(i) If $A = \{0\}$ then $n(A) = 0$. False
 $n(A) = 1$

(ii) $n(\emptyset) = 1$. False $n(\emptyset) = 0$

(iii) If $T = \{a, l, a, h, b, d, h\}$ then $n(T) = 5$
True

(iv) If $B = \{15, 51, 15, 5, 13\}$ then $n(B) = 6$
False; $n(B) = 4$