

1.) i)  $\{3, 5, 7, \dots\}$  = Infinite set

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

iii)  $\{\dots, -3, -2, -1, 0, 1, 2\}$  = Infinite set

iv)  $\{20, 30, 40, 50, \dots, 200\}$  = Finite set

2.) i) Set of counting numbers between 5 and 6. Empty

ii) Set of odd numbers between 7 and 19. Not empty

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

iv) Set of even numbers not divisible by 2. Empty

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

3.) 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

4.) i) Set of integers = Infinite

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

iii)  $\{\text{Fractions between } 1 \text{ and } 2\}$  = Finite

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

v) Set of trees in the world = Infinite

vi) Set of leaves on a tree = Infinite

vii) Set of all the children in all the schools of Delhi. Infinite

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

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

x)  $\{\text{No. of points in a line segment } 4\text{cm long}\}$  = Finite

5) i.) Not empty

ii.) Empty

iii.) ~~Not Empty~~ Empty

iv.) Not empty

v.) Not empty

vi.) Empty

vii.) Not empty

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