



DELHI PUBLIC SCHOOL – GANDHIDHAM
MATHEMATICS WORKSHEET OF CLASS XI

Topic: -Sets

1. List all the element of the set $A = \{x : x \text{ is an integer } x^2 \leq 4\}$ [1]

2. From the sets given below pair the equivalent sets.
 $A = \{1, 2, 3\}$, $B = \{x, y, z, t\}$, $C = \{a, b, c\}$ $D = \{0, a\}$ [1]

3. Write the following as interval
 (i) $\{x : x \in \mathbb{R}, -4 < x \leq 6\}$
 (ii) $\{x : x \in \mathbb{R}, 3 \leq x \leq 4\}$ [1]

4. If $A = \{3, 5, 7, 9, 11\}$, $B = \{7, 9, 11, 13\}$, $C = \{11, 13, 15\}$
 Find $(A \cap B) \cap (B \cup C)$ [1]

5. Write the set $\{\frac{1}{3}, \frac{3}{5}, \frac{5}{7}, \frac{7}{9}, \frac{9}{11}, \frac{11}{13}\}$ in set builder form. [1]

6. In a group of 65 people, 40 like cricket, 10 like both cricket and tennis. How many like tennis only and not cricket? How many like tennis? [4]

7. Let A, B and C be three sets $A \cup B = A \cup C$ and $A \cap B = A \cap C$ show that $B = C$ [4]

8. If $U = \{a, e, i, o, u\}$
 $A = \{a, e, i\}$ And
 $B = \{e, o, u\}$
 $C = \{a, i, u\}$
 Then verify that $A \cap (B - C) = (A \cap B) - (A \cap C)$ [4]

9. In a town of 10,000 families, it was found that 40% families buy newspaper A, 20% families buy newspaper B and 10% families buy newspaper C. 5% families buy A and B, 3% buy B and C and 4% buy A and C. If 2% families buy all the three papers. Find the no. of families which buy
 (i) A only (ii) B only (iii) none of A, B, and C. [6]

10. Two finite sets have m and n elements. The total no. of subsets of the first set is 56 more than the total no. of subsets of second set. Find the value of m and n. [6]