



1	If $n(A \cup B) = 18$ , $n(A - B) = 5$ , $n(B - A) = 3$ then find $n(A \cap B)$ a) 8      b) 10      c) 26      d) 16	1
2	Write $\{x : x \in \mathbb{R}, -3 \leq x < 7\}$ as interval. a) $(-3, 7)$ b) $[-3, 7]$ c) $[-3, 7)$ d) $(-3, 7]$	1
3	If $A = \{1, 2, 4\}$ , $B = \{2, 4, 5\}$ , $C = \{2, 5\}$ then $(A - B) \times (B - C)$ a) $\{(1, 2), (1, 5), (2, 5)\}$ ;      b) $\{1, 4\}$ c) $\{1, 4\}$ ;      d) None of these.	1
4	Write in setbuilder form. $\{(1, \frac{1}{2}), (2, \frac{2}{9}), (3, \frac{3}{28}), (4, \frac{4}{65}) \dots \dots \dots (10, \frac{10}{1001})\}$	1
5	Using venn diagram prove that $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$	2
6	Verify De'Morgan's laws :- $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ $A = \{1, 3, 4, 5, 7, 9, 10\}$ $B = \{1, 3, 4, 5, 7, 8, 10\}$	2
7	Find a and b if $(a + b, 2a - b) = (8, 7)$	2
8	If $R = \{(x, y) : x, y \in \mathbb{Z}, x^2 + y^2 = 64\}$ , then, Write R in roster form	2
9	Let $A = \{1, 2, 3, 4\}$ , $B = \{1, 4, 9, 16, 25\}$ and R be a relation defined from A to B as, $R = \{(x, y) : x \in A, y \in B \text{ and } y = x^2\}$ (a) Depict this relation using arrow diagram. (b) Find domain of R. (c) Find range of R. (d) Write co-domain of R.	4