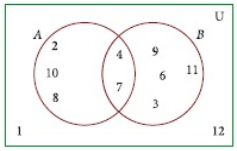
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Questions:

2 Marks

1. Using the given Venn diagram, write the elements of A-B



2. Find A∪B, A∩B, A–B and B–A for the following sets.
A = {x : x ∈ N, x ≤ 10} and B = {x : x ∈ W, x < 6}

3. If U = {a, b, c, d, e, f, g, h}, A = {b, d, f, h} and B = {a, d, e, h}, find the following sets. A′∩B′

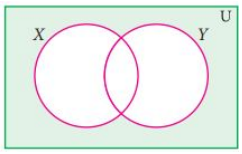
4. If U = {a, b, c, d, e, f, g, h}, A = {b, d, f, h} and B = {a, d, e, h}, find the following sets. (B′)′

5. Let U = {0, 1, 2, 3, 4, 5, 6, 7}, A = {1, 3, 5, 7} and B = {0, 2, 3, 5, 7}, find the following sets. A′∩B′

6. Let U = {0, 1, 2, 3, 4, 5, 6, 7}, A = {1, 3, 5, 7} and B = {0, 2, 3, 5, 7}, find the following sets. (B′)′

7. Find the symmetric difference between the following sets. X = {5, 6, 7} and Y= {5, 7, 9, 10}

8. Using the set symbols, write down the expressions for the shaded region in the following



9. If P = {1,2,5,7,9}, Q = {2, 3, 5, 9, 11}, R = {3, 4,5 7, 9} and S = {2, 3, 4, 5, 8}, then find
(i) $(P \cup Q) \cup R$
(ii) $(P \cap Q) \cap S$
(iii) $(Q \cap S) \cap R$

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10. Test for the commutative property of union and intersection of the sets
P = { x : x is a real number between 2 and 7} and
Q = { x : x is an rational number between 2 and 7}.

11. If A = {p, q, r, s}, B = {m, n, q, s, t} and C = {m, n, p, q, s}, then verify the associative property of union of sets.

12. Verify the associative property of intersection of sets for A = $\{-11, \sqrt{2}, \sqrt{5}, 7\}$, B = $\{\sqrt{3}, \sqrt{5}, 6, 13\}$ and C = $\{\sqrt{2}, \sqrt{3}, \sqrt{5}, 9\}$.

13. If A = { x : x = 2^n, n ∈ W and n < 4}, B = {x : x = 2n, n ∈ N and n ≤ 4} and C = {0, 1, 2, 5, 6} , then verify the associative property of intersection of sets.

14. Let A and B be two overlapping sets and the universal set be U. Draw appropriate Venn diagram for each of the following,
(B–A)′

15. Let A and B be two overlapping sets and the universal set be U. Draw appropriate Venn diagram for each of the following,
A′∩B′