1. List the elements in the set. \( \{x \mid x < 3 \text{ and } x \in Z \} \)

2. List the elements in the set. \( \{x \mid 2 \leq x < 9 \text{ and } x \in N \} \)

3. List the elements in the set. \( \left\{ x \mid x \in Q \text{ and } x = \frac{n}{n+1}, n \in N \right\} \)

4. State whether the pair of sets is equal, equivalent, both or neither. \( A = \{1, 3, 5, 7, \ldots\} \) \( B = \{2, 4, 6, 8, \ldots\} \)

5. State whether \( A \subseteq B, B \subseteq A, \) both or neither. \( A = \{\ldots, -4, -2, 0, 2, 4, \ldots\} \) \( B = Q \)

6. Subsets
   a. Determine the number of subsets in the set \( A = \{a, b, c, d, e, f\} \)
   b. Determine the number of proper subsets in the \( A = \{a, b, c, d, e, f\} \)

7. Label the Venn Diagram and hatch the relationship \( A \cap (B \cup C) \)
For the next three problems, use \( U = \{1,2,3,4,5,6,7,8,9,10\} \),
\( A = \{1,3,5,7,9\} \quad B = \{2,4,5,8\} \quad C = \{1,4,10\} \)

8. Find all members of the set \( A \cup (B \cap C) \)

9. Find all members of the set \( A \cup (\overline{B \cap C}) \)

10. Find all members of the set \( (A \cap C) \cap (B \cup A) \)

11. Use the Distributive Property of Sets to rewrite \( (B \cap A) \cup (B \cap \overline{C}) \)

12. Use Demorgans Property to rewrite \( \overline{B \cap C} \)

13. Use the Venn Diagram to find the all members of the set \( A \cup (B \cup C) \)