Set Notation and Venn Diagrams

Given \( U = \{1, 4, 7, 8, 11, 14, 17, 18, 19, 21, 24, 27, 30\} \), \( A = \{1, 7, 8, 14, 19\} \), \( B = \{1, 4, 14, 24\} \), \( C = \{14, 17, 18, 19, 21, 24\} \), find the following sets.

1. Draw a Venn Diagram to represent the sets \( U \), \( A \), \( B \), and \( C \).

2. \( A \cap B \) 3. \( A \cup B \) 4. \( A \cap C \)

5. \( A' \) 6. \( B' \) 7. \( C' \)

8. \( C \cap B \) 9. \( A \cup C \) 10. \( (A \cup B) \cup C \) 11. \( (A \cap B) \cap C \)

12. \( (C \cap B) \cup (A \cap B) \) 13. \( (A \cap C) \cup B \) 14. \( (A \cup C) \cap B \)

15. Given \( A = \{-2, 0, 2, 4\} \), \( B = \{-1, 0, 1, 2\} \), and \( C = \{0, 1, 2, 3, 4\} \), draw a Venn Diagram to represent the sets.

16. Given \( A = \{-4, -2, 0, 2, 4\} \), \( B = \{-3, -1, 1, 3\} \), and \( C = \{-2, -1, 0, 1, 2\} \), draw a Venn Diagram to represent the sets.