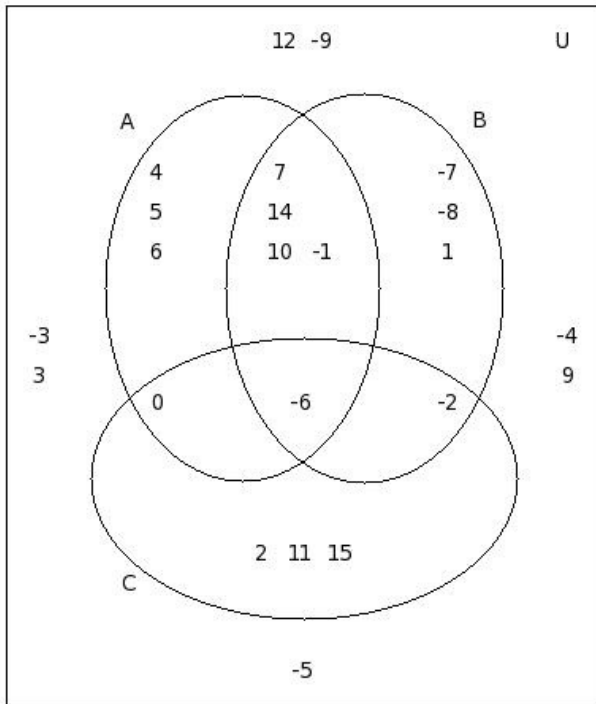


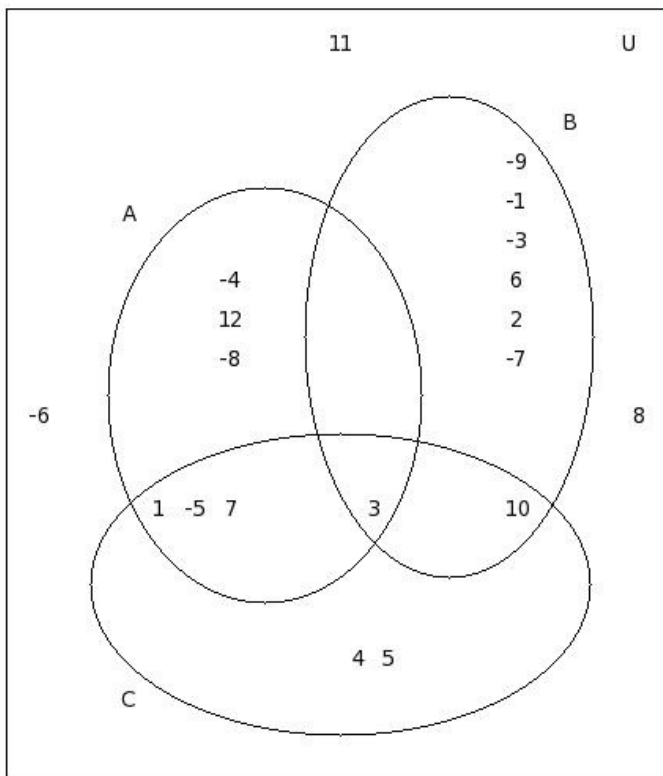


1. Find A



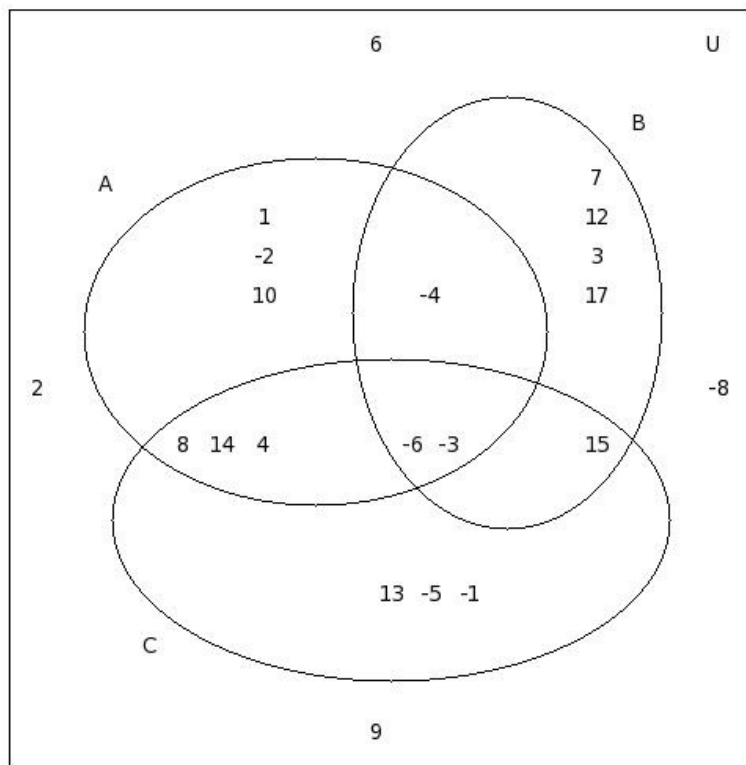
- (i) {14,4,-1,6,0,7,5,-6,10,12} (ii) {14,4,-1,6,0,5,-6,10} (iii) {14,4,-1,6,7,5,-6,10,11}
- (iv) {14,4,-1,6,0,7,5,-6,10} (v) {14,-1,6,0,7,5,-6,10,12}

2. Find B



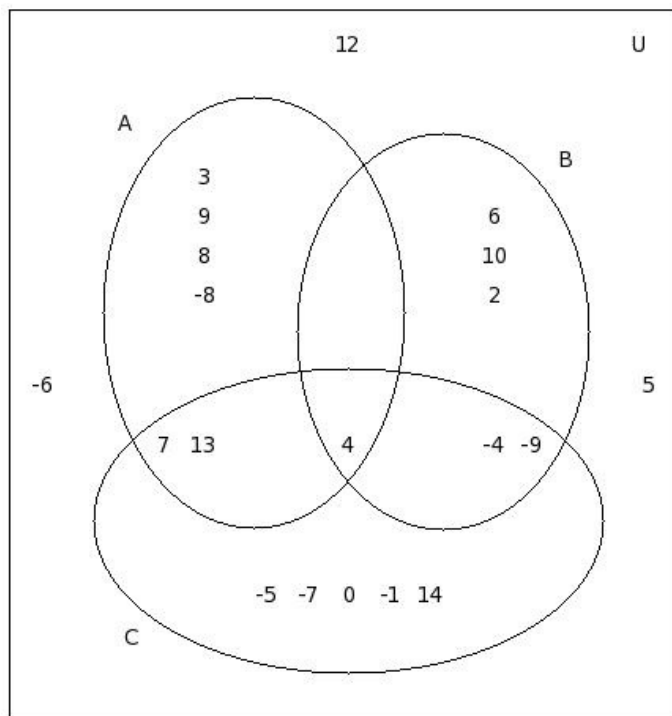
- (i) {3,2,6,-1,-7,-3,10,1} (ii) {3,-9,2,6,-1,-7,-3,10,-4} (iii) {3,-9,2,6,-1,-7,-3,10} (iv) {3,-9,2,6,-1,-3,10,-4}
- (v) {3,-9,2,6,-7,-3,10}

3. Find C



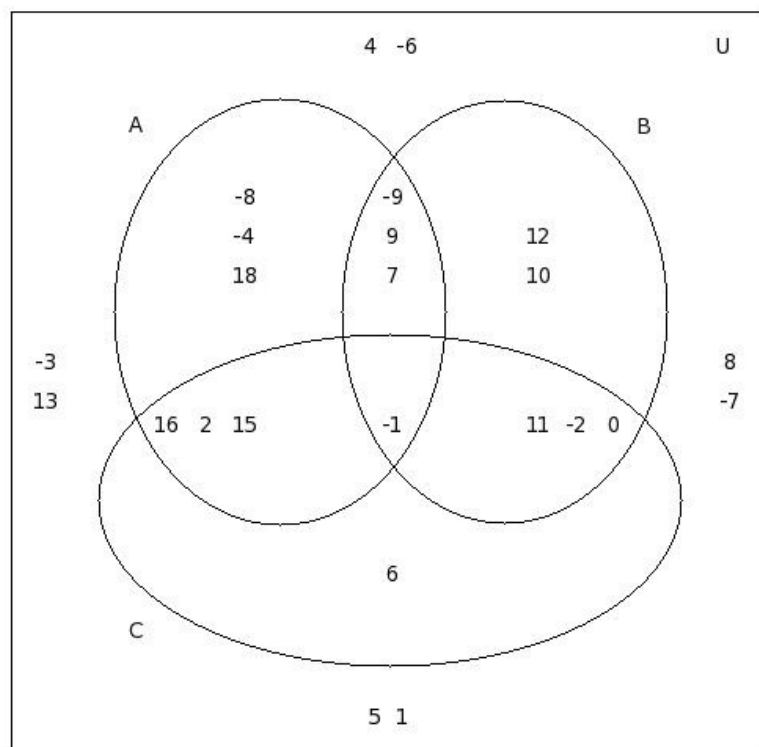
- (i) {13,-1,-6,15,8,-5,-3,4} (ii) {13,-1,-6,15,8,-5,-3,4,14} (iii) {13,-1,-6,15,8,-5,4,14,1}
 (iv) {13,-1,-6,15,8,-5,-3,4,14,7} (v) {13,-1,-6,15,8,-5,-3,4,7}

4. Find $A \cup B$



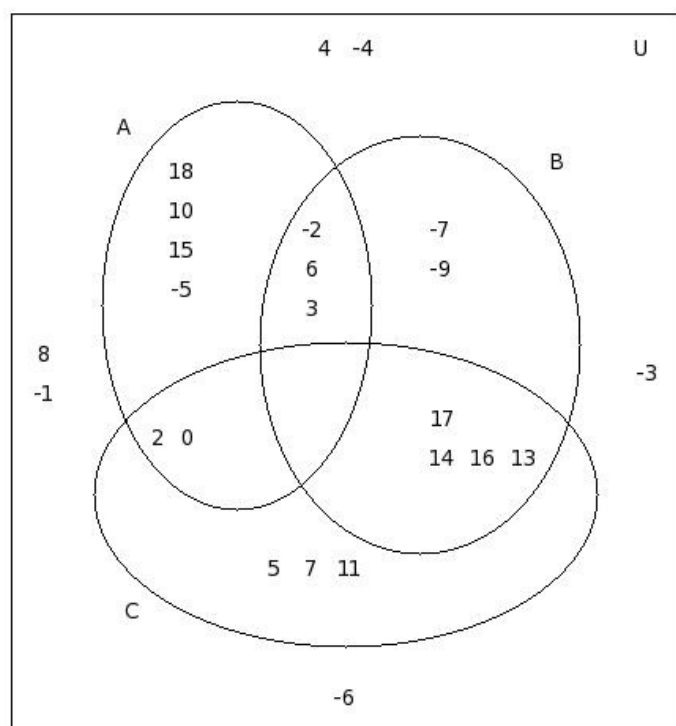
- (i) {-9,3,7,4,10,-8,8,9,2,-4,6} (ii) {-9,7,13,4,10,-8,8,9,2,-4,6,-5} (iii) {-9,3,7,13,4,10,-8,8,9,2,-4,5}
 (iv) {-9,3,7,13,4,10,-8,8,9,2,-4,6,5} (v) {-9,3,7,13,4,10,-8,8,9,2,-4,6}

5. Find $B \cup C$



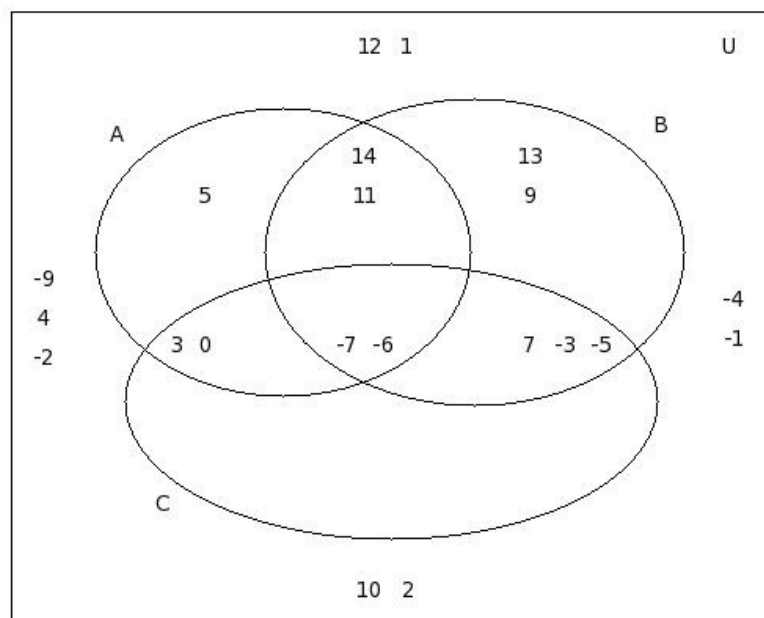
- (i) $\{10, 16, -1, -9, 12, 7, 9, -2, 6, 11, 0, 15, 2\}$ (ii) $\{10, 16, -1, -9, 12, 7, 9, 6, 11, 0, 15, 2, 4\}$
 (iii) $\{16, -1, -9, 12, 7, 9, -2, 6, 11, 0, 15, 2\}$ (iv) $\{10, 16, -1, -9, 12, 7, 9, -2, 6, 11, 0, 15, 2, -7\}$
 (v) $\{10, 16, -1, -9, 7, 9, -2, 6, 11, 0, 15, 2, -7\}$

6. Find $C \cup A$



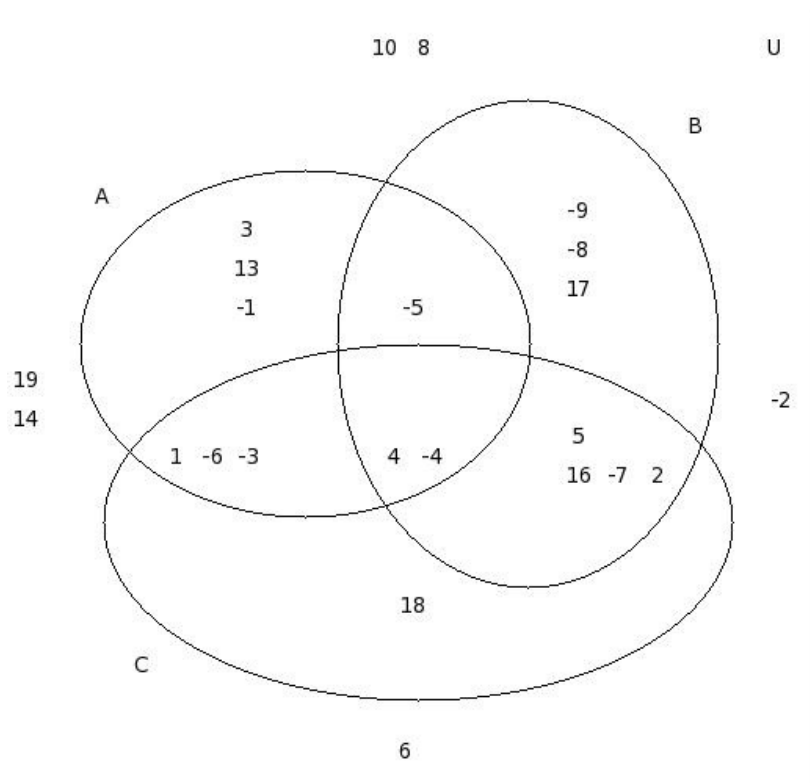
- (i) $\{11, 0, 3, 17, -5, 7, 5, 10, 15, 2, 6, -2, 14, 16, 18\}$ (ii) $\{11, 0, 3, 17, -5, 7, 5, 10, 15, 2, 6, 13, -2, 14, 16, 18, -7\}$
 (iii) $\{11, 0, 3, 17, -5, 7, 5, 10, 15, 2, 6, 13, -2, 14, 16, 18\}$ (iv) $\{11, 0, 3, 17, -5, 7, 5, 10, 15, 2, 6, 13, -2, 14, 16, -7\}$
 (v) $\{11, 3, 17, -5, 7, 5, 10, 15, 2, 6, 13, -2, 14, 16, 18, -4\}$

7. Find $A \cup B \cup C$



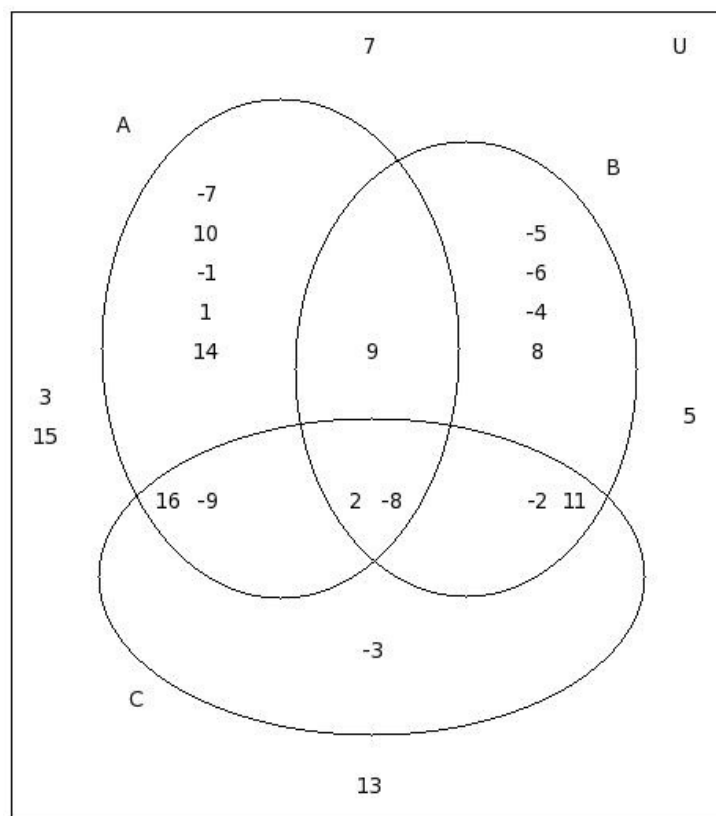
- (i) $\{11, -5, 3, -6, 14, 9, 0, 7, -7, 5, -3\}$ (ii) $\{11, -5, 3, -6, 14, 9, 0, 7, -7, 5, 13, -3\}$ (iii) $\{11, -5, 3, -6, 9, 0, 7, -7, 5, 13, -3, -2\}$
 (iv) $\{11, -5, 3, -6, 14, 9, 0, 7, -7, 5, 13, -3, 1\}$ (v) $\{11, -5, 3, -6, 14, 0, 7, -7, 5, 13, -3, 1\}$

8. Find $(A \cup B) \cup C$



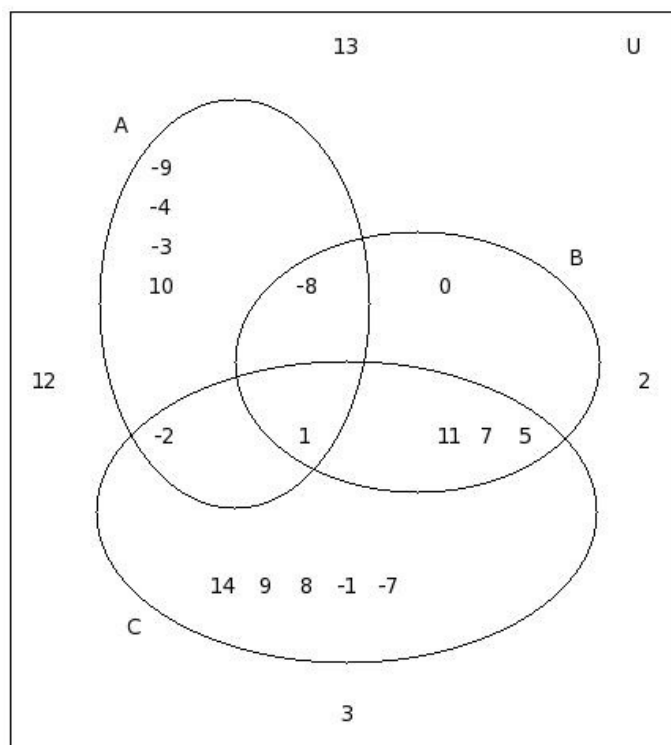
- (i) $\{5, -9, -7, 2, 4, 18, 3, 1, 16, -6, 13, -5, -3, -1, -4, -8, 10\}$ (ii) $\{5, -9, -7, 2, 17, 4, 18, 3, 1, 16, -6, 13, -5, -3, -1, -4, -8\}$
 (iii) $\{5, -9, -7, 2, 17, 18, 3, 1, 16, -6, 13, -5, -3, -1, -4, -8\}$ (iv) $\{5, -9, 2, 17, 4, 18, 3, 1, 16, -6, 13, -5, -3, -1, -4, -8, 19\}$
 (v) $\{5, -9, -7, 2, 17, 4, 18, 3, 1, 16, -6, 13, -5, -3, -1, -4, -8, 19\}$

9. Find $A \cup (B \cap C)$



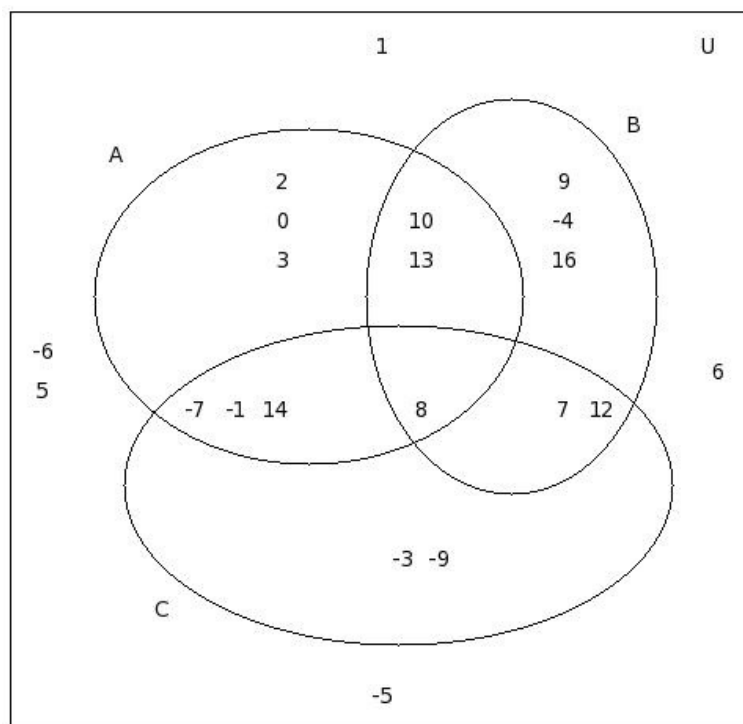
- (i) $\{-1, -3, -7, -2, -4, 9, -5, 10, -6, -8, -9, 1, 8, 16, 2, 11\}$ (ii) $\{-1, -3, -7, -2, -4, 9, -5, 10, -6, -8, -9, 1, 8, 16, 2, 11, 14, 7\}$
 (iii) $\{-1, -3, -7, -2, -4, 9, -5, 10, -6, -8, -9, 1, 8, 16, 2, 11, 14\}$ (iv) $\{-1, -3, -7, -2, -4, 9, -5, 10, -6, -8, 1, 8, 16, 2, 11, 14, 5\}$
 (v) $\{-1, -3, -7, -2, -4, 9, -5, 10, -6, -8, -9, 1, 8, 16, 11, 14, 7\}$

10. Find $A \cap B$



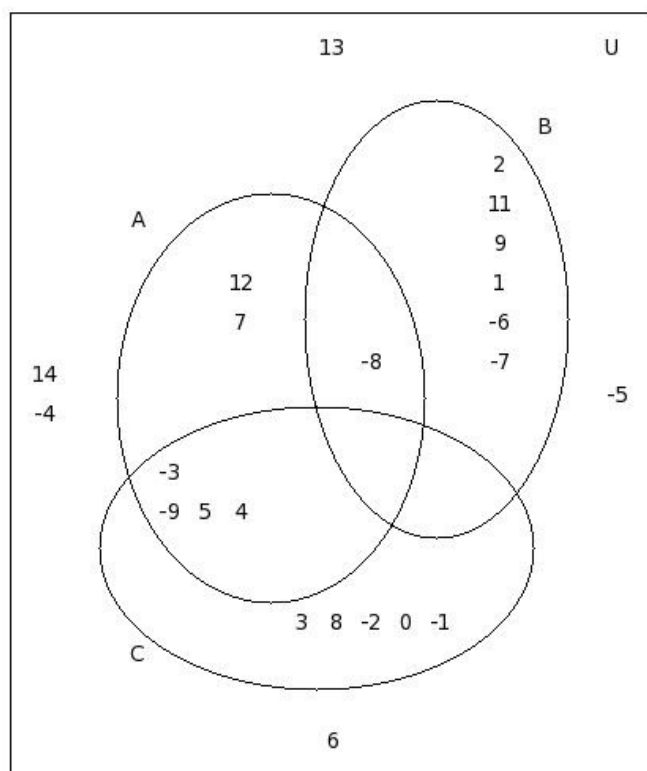
- (i) $\{1, -8, 3\}$ (ii) $\{1\}$ (iii) $\{1, 3\}$ (iv) $\{-8, 13\}$ (v) $\{1, -8\}$

11. Find $B \cap C$



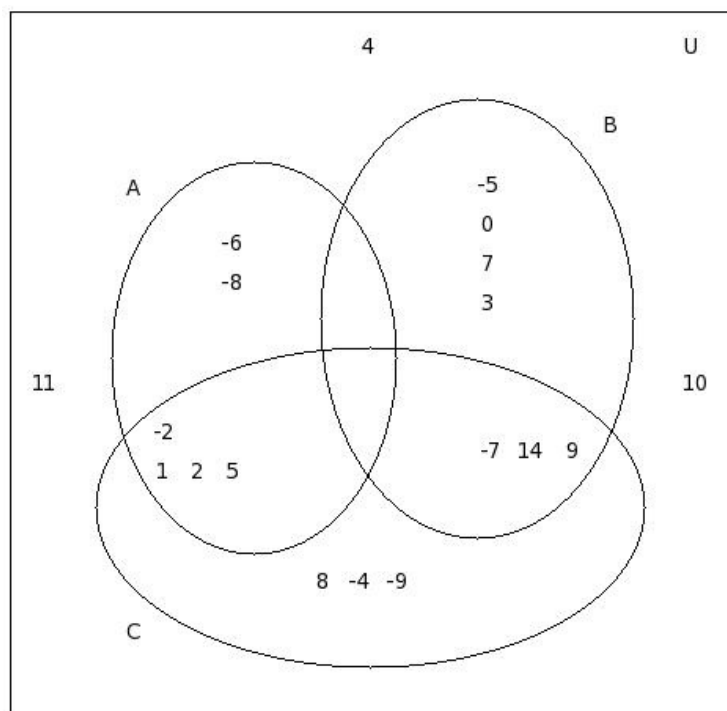
- (i) {12,7,8,13} (ii) {12,7} (iii) {12,7,8} (iv) {12,7,13} (v) {7,8,14}

12. Find $C \cap A$



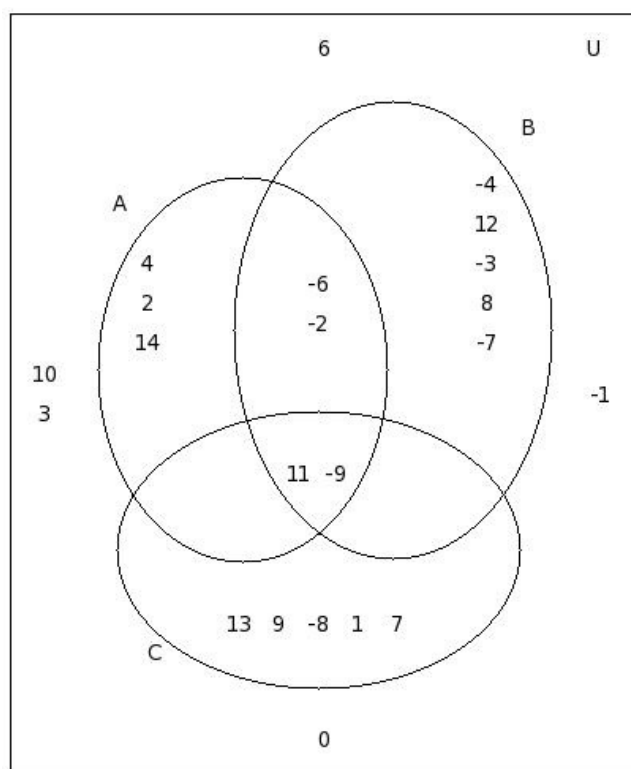
- (i) {-9,5,4} (ii) {-9,5,-3,4} (iii) {-9,-3,4,-1} (iv) {-9,5,4,-2} (v) {-9,5,-3,4,-2}

13. Find $A \cap B \cap C$



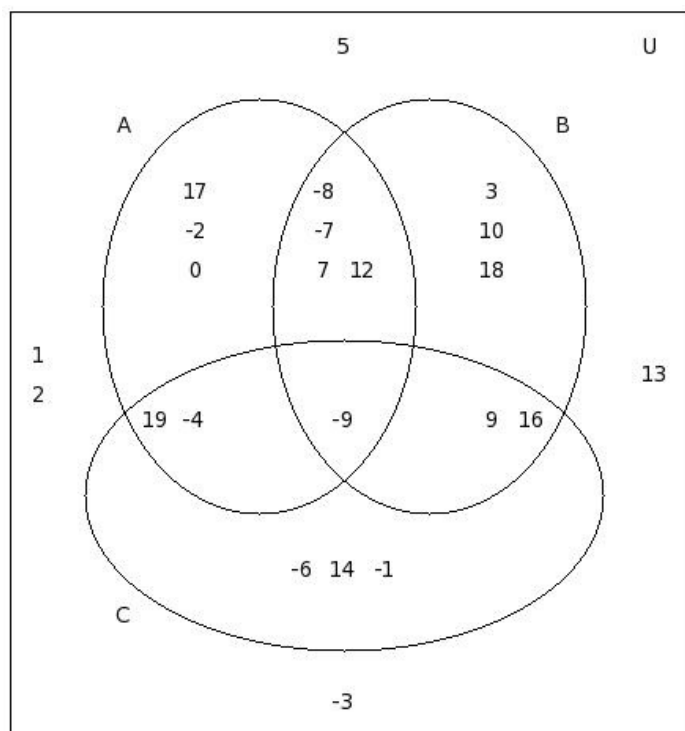
(i) {1} (ii) {} (iii) {-9}

14. Find $(A \cap B) \cap C$



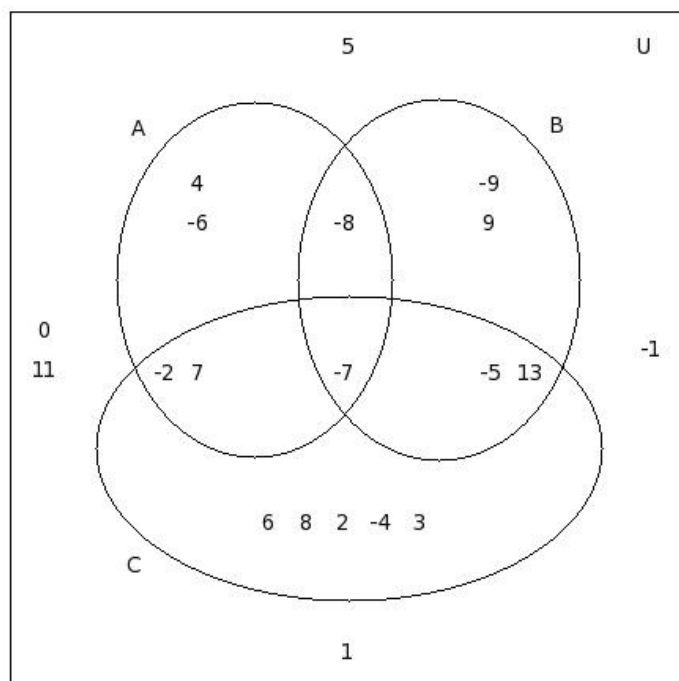
(i) {11,-8} (ii) {11,-6} (iii) {11,-9,-6} (iv) {-9} (v) {11,-9}

15. Find $A \cap (B \cap C)$



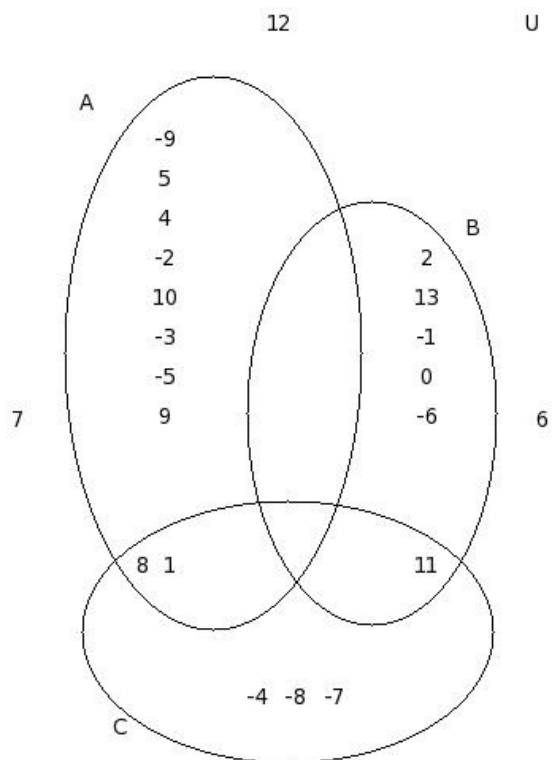
- (i) $\{-9\}$ (ii) $\{0\}$ (iii) $\{\}$ (iv) $\{-9, -6\}$ (v) $\{-6\}$

16. Find $A \cup (B \cap C)$



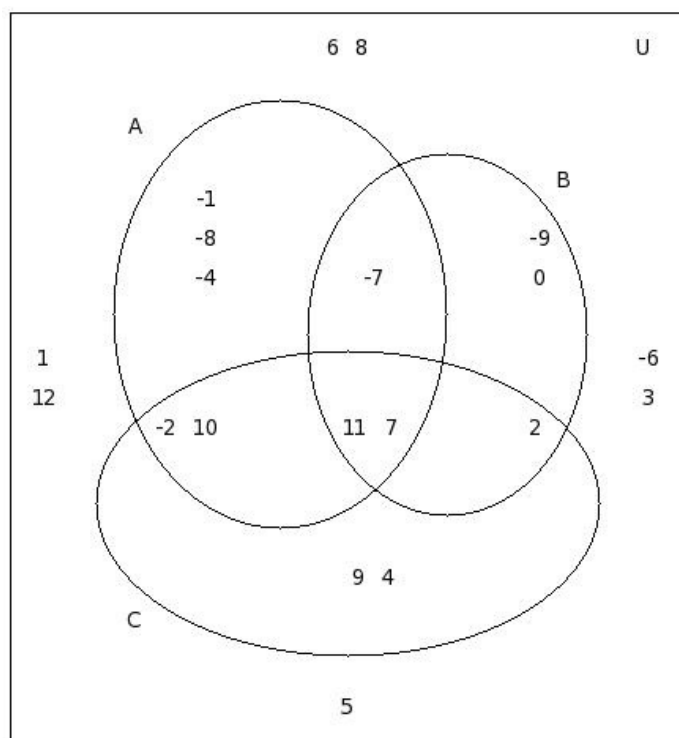
- (i) $\{-2, 7, -7, 13, -8, 4, -5, 11\}$ (ii) $\{-2, 7, -7, 13, -8, 4, -6, -5, 11\}$ (iii) $\{-2, 7, -7, 13, -8, 4, -6, -5\}$ (iv) $\{-2, 7, -7, 13, -8, -6, -5\}$
 (v) $\{-2, 7, 13, -8, 4, -6, -5, 3\}$

17. Find $B \cup (C \cap A)$



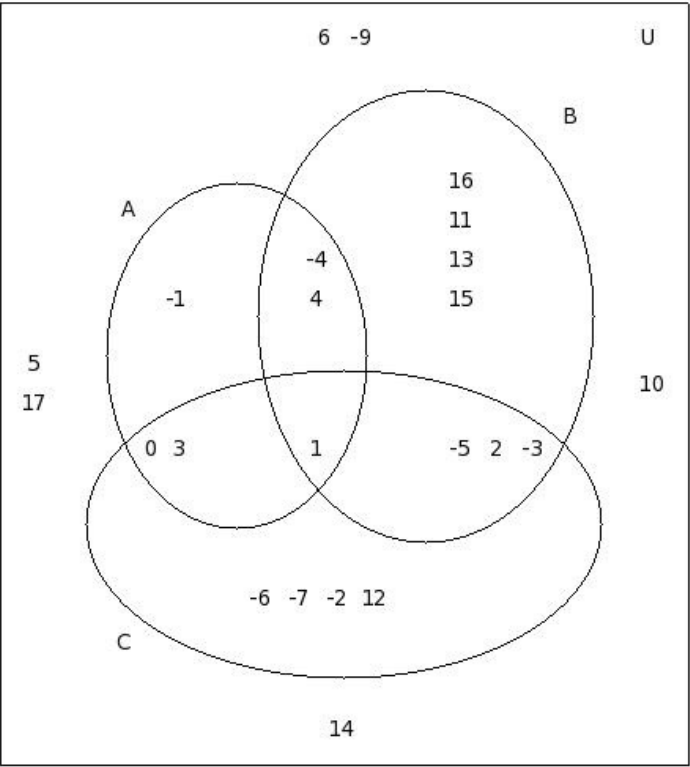
- (i) $\{1, 8, 11, -1, -6, 13, 0, 2, -8\}$ (ii) $\{1, 11, -1, -6, 13, 0, 2, -4\}$ (iii) $\{1, 8, 11, -1, -6, 13, 0, -8\}$ (iv) $\{1, 8, -1, -6, 13, 0, 2\}$
 (v) $\{1, 8, 11, -1, -6, 13, 0, 2\}$

18. Find $C \cup (A \cap B)$



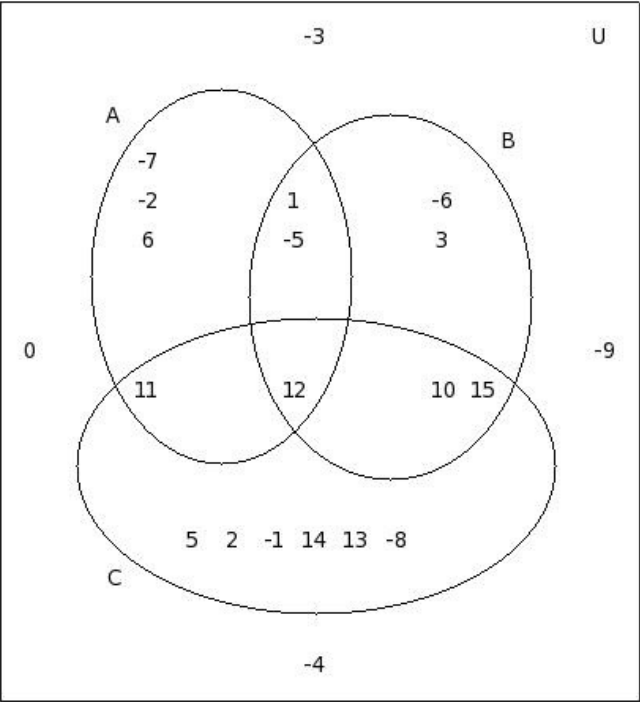
- (i) $\{-2, 7, 9, 10, 2, -7, 11, 4, 5\}$ (ii) $\{-2, 7, 9, 10, 2, -7, 11\}$ (iii) $\{-2, 7, 9, 10, 2, -7, 11, 4\}$ (iv) $\{-2, 7, 9, 10, 2, -7, 4, 5\}$
 (v) $\{-2, 7, 9, 10, 2, -7, 11, -6\}$

19. Find $A \cap (B \cup C)$



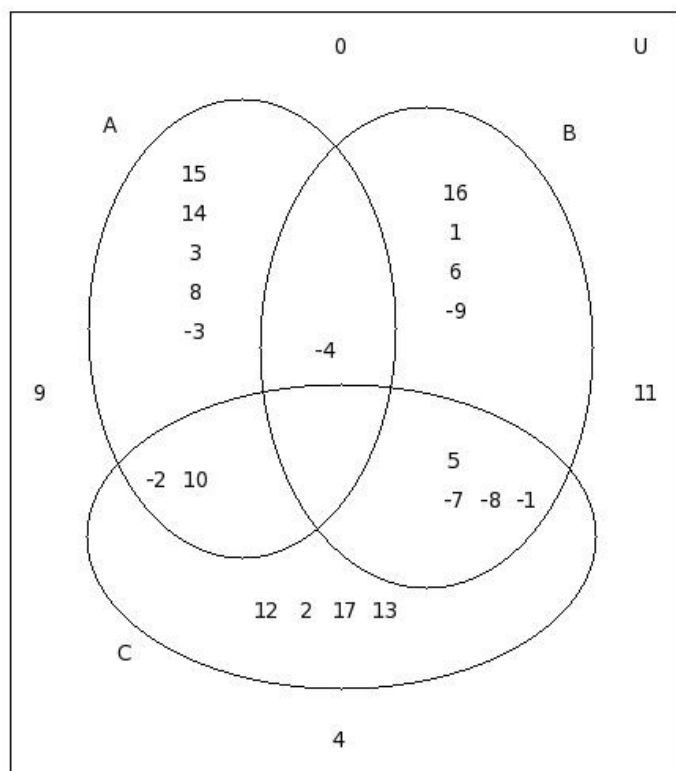
- (i) $\{3,4,0,-4,1\}$ (ii) $\{3,4,0,-4,14\}$ (iii) $\{4,0,-4,1\}$ (iv) $\{3,4,0,-4,1,14\}$ (v) $\{3,0,-4,1,-7\}$

20. Find $B \cap (C \cup A)$



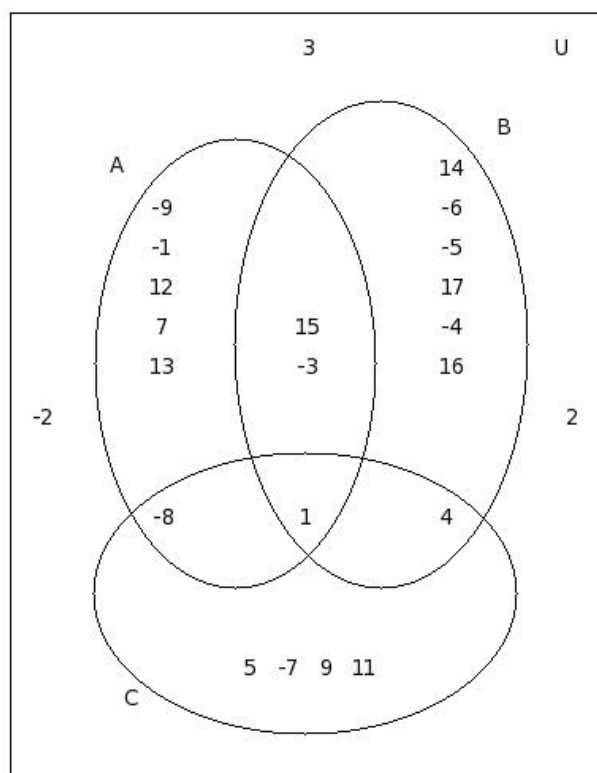
- (i) $\{12,10,1,-5,-7\}$ (ii) $\{15,12,10,1,-5\}$ (iii) $\{12,10,1,-5\}$ (iv) $\{15,10,1,-5,6\}$ (v) $\{15,12,10,1,-5,-7\}$

21. Find $C \cap (A \cup B)$



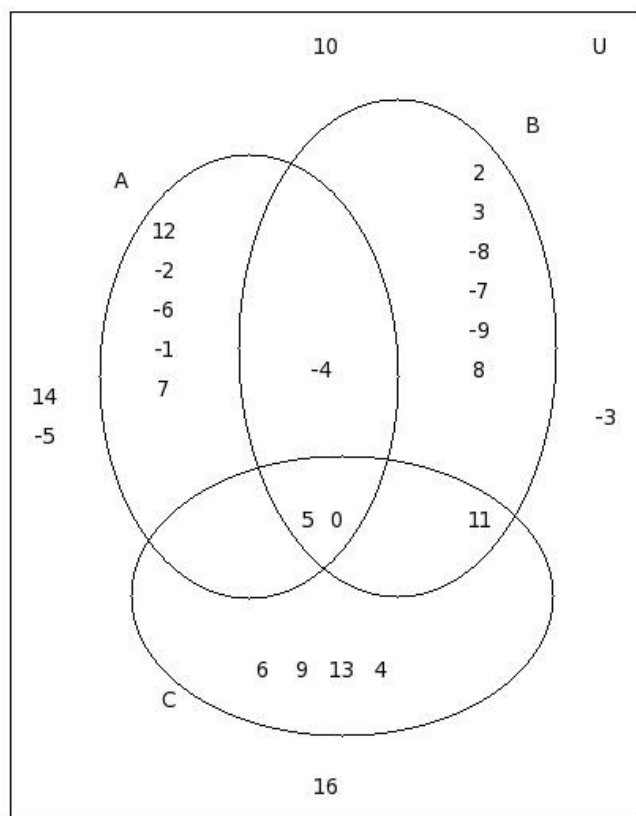
- (i) $\{-8, -2, -7, -1, 10, 5\}$ (ii) $\{-8, -2, -7, -1, 10, 5, 15\}$ (iii) $\{-8, -2, -7, 10, 5, 2\}$ (iv) $\{-8, -2, -1, 10, 5\}$
 (v) $\{-8, -2, -1, 10, 5, 15\}$

22. Find $(A \cup B) \cap (A \cup C)$



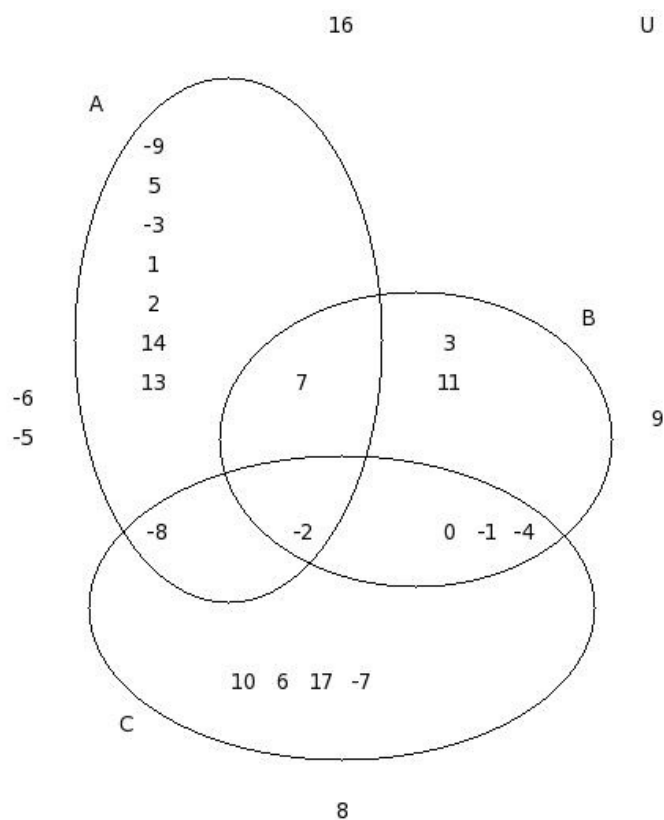
- (i) $\{4, 7, 12, 1, -8, 15, 13, -3, -9\}$ (ii) $\{4, 7, -1, 12, 1, -8, 15, -3, -9, -4\}$ (iii) $\{4, -1, 12, 1, -8, 15, 13, -3, -9, -2\}$
 (iv) $\{4, 7, -1, 12, 1, -8, 15, 13, -3, -9, -4\}$ (v) $\{4, 7, -1, 12, 1, -8, 15, 13, -3, -9\}$

23. Find $(B \cup C) \cap (B \cup A)$



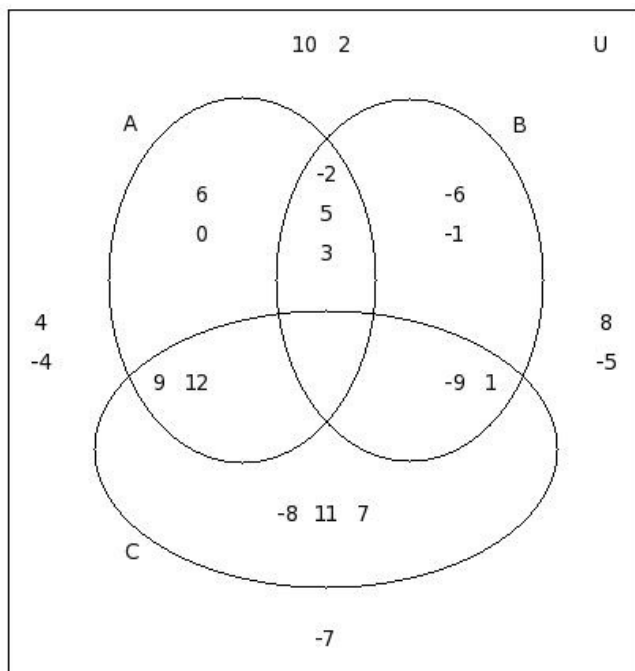
- (i) $\{0, 5, -7, 3, -4, -8, 8, -9, 11, 2\}$ (ii) $\{0, 5, -7, -4, -8, 8, -9, 11, 2, 16\}$ (iii) $\{5, -7, 3, -4, -8, 8, -9, 11, 2, -5\}$
 (iv) $\{0, 5, -7, 3, -4, -8, 8, -9, 11, 2, -5\}$ (v) $\{0, 5, -7, 3, -4, -8, -9, 11, 2\}$

24. Find $(C \cup A) \cap (C \cup B)$



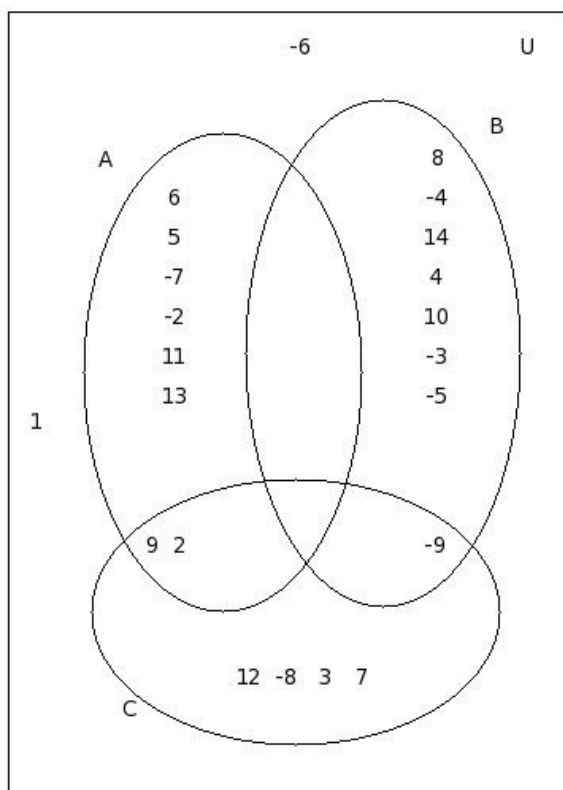
- (i) $\{7, -8, -1, -7, -4, 6, 10, 0, 17, 9\}$ (ii) $\{7, -8, -1, -7, -4, 6, 0, -2, 17, 5\}$ (iii) $\{7, -8, -1, -7, -4, 6, 10, 0, -2, 17\}$
 (iv) $\{7, -8, -1, -7, -4, 6, 10, 0, -2, 17, 9\}$ (v) $\{7, -8, -7, -4, 6, 10, 0, -2, 17\}$

25. Find $(A \cap B) \cup (A \cap C)$



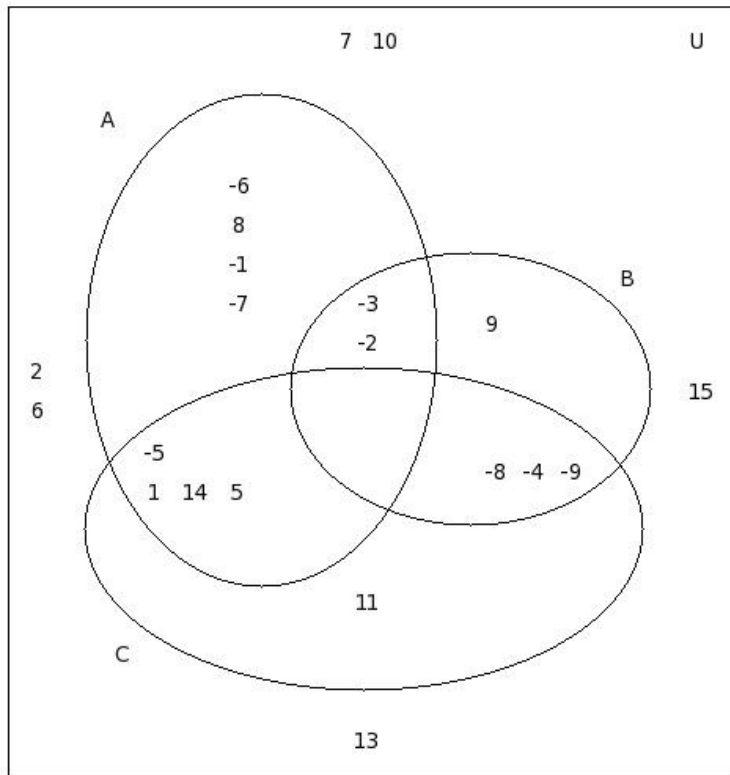
- (i) {9,-2,3,12,8} (ii) {9,-2,3,12} (iii) {9,-2,3,12,-1} (iv) {9,-2,3,12,5} (v) {9,-2,3,12,5,8}

26. Find $(B \cap C) \cup (B \cap A)$



- (i) {-9,5} (ii) {-9} (iii) {5} (iv) {6} (v) {}

27. Find $(C \cap A) \cup (C \cap B)$



- (i) $\{5, -4, -5, -9, 1, -8, 14, 10\}$ (ii) $\{5, -4, -5, -9, 1, -8, 10\}$ (iii) $\{5, -4, -5, 1, -8, 14\}$ (iv) $\{5, -4, -5, -9, 1, -8, 14\}$
 (v) $\{5, -4, -5, 1, -8, 14, -7\}$

28. If $\mu = \{-1, 4, 9, -3, 6, 2, -5, 12, 11, 8, 7, 10, 5, -9, -6, -2, 14, 13, -8\}$, $A = \{-1, 4, 9, -3, 6, 2, -5, 12\}$, $B = \{6, 11, 9, -1, 4, 8, -5\}$, $C = \{11, 2, 8, 12, 7, 10, -5, -1\}$, find $A \cap B \cap C$

- (i) $\{2, 6, 9, -1, -3, -5, 12\}$ (ii) $\{2, 9, -1, -3, -5, 12, 4\}$ (iii) $\{2, 6, 9, -1, -3, -5, 12, 10\}$ (iv) $\{2, 6, 9, -1, -3, -5, 12, 4\}$
 (v) $\{2, 6, 9, -1, -3, -5, 12, 4, 10\}$

29. If $\mu = \{9, 8, -8, 12, 5, -9, -4, 11, -2, -7, 1, 3, 14, 4, -5, -6, 2, -3, -1\}$, $A = \{9, 8, -8, 12, 5, -9, -4, 11\}$, $B = \{-2, -7, 8, 1, 3, 14, 4\}$, $C = \{-5, 8, -8, 9, -6, 2, -2, 5\}$, find $A \cap B \cap C$

- (i) $\{4, 8, 3, -7, 14, 1\}$ (ii) $\{4, 8, 3, -7, 14, -2\}$ (iii) $\{4, 8, 3, -7, 14, -2, 1\}$ (iv) $\{4, 8, 3, -7, 14, -2, 11\}$
 (v) $\{4, 8, 3, -7, 14, -2, 1, 11\}$

30. If $\mu = \{2, -4, 3, 5, 0, -2, -5, -7, 12, -8, -3, 11, 6, 13, 1, 7, 4, 14, 15, 9, 10, -1, 8, -6\}$, $A = \{2, -4, 3, 5, 0, -2, -5, -7, 12, -8\}$, $B = \{3, -5, -3, 0, 11, 6, -7\}$, $C = \{-2, 11, 13, 6, -4, 2, -5\}$, find $A \cap B \cap C$

- (i) $\{6, 13, -2, 2, -5, -4, 11\}$ (ii) $\{6, 13, 2, -5, -4, 11, 12\}$ (iii) $\{6, 13, -2, 2, -5, -4\}$ (iv) $\{6, 13, 2, -5, -4, 11\}$
 (v) $\{6, 13, -2, 2, -5, -4, 11, 12\}$

31. If $\mu = \{-4, -3, 6, 10, -9, 11, 13, 3, -8, 4, 9, 7, -5, 15, -6, -7, 2, 8, -1, 17, 1\}$, $A = \{-4, -3, 6, 10, -9, 11, 13\}$, $B = \{-9, 11, 3, 10, -8, 13, 4, 9, 7, -3\}$, $C = \{7, -5, -8, 15, 6, -6, -7, 4, 2\}$, find $A \cup B \cup C$

- (i) $\{4, -8, 11, 10, 9, 3, 7, 13, -9, -4, -3\}$ (ii) $\{4, -8, 11, 10, 9, 3, 7, 13, -9, -4, -3, 17\}$ (iii) $\{4, -8, 6, 11, 10, 9, 3, 7, 13, -9, -4, -3\}$
 (iv) $\{4, -8, 6, 11, 10, 9, 3, 7, 13, -4, -3\}$ (v) $\{4, -8, 6, 11, 10, 9, 3, 7, 13, -9, -4, -3, 17\}$

32. If $\mu = \{8, -5, -8, 0, 7, 2, -4, 6, -7, 11, -2, 5, 3, 1, -9, -1, 9, -3, 10, 4\}$, $A = \{8, -5, -8, 0, 7, 2\}$, $B = \{-4, 6, -7, 11, -2, 5\}$, $C = \{-2, 3, 1, 2, -9, -1, 11, -4\}$, find $B \cup C$

- (i) $\{11, -7, 2, -2, 3, 5, 6, -1, -9, 1, 8\}$ (ii) $\{11, -4, -7, 2, -2, 3, 5, 6, -9, 1\}$ (iii) $\{11, -4, -7, 2, -2, 3, 5, 6, -1, -9, 1\}$
 (iv) $\{11, -4, -7, 2, -2, 3, 5, 6, -1, -9, 1, 8\}$ (v) $\{11, -7, 2, -2, 3, 5, 6, -1, -9, 1\}$

33. If $\mu = \{16,9,-5,7,-2,0,4,-7,13,-1,6,-8,12,8,-6,-3,15,-9,11,14,3,10,-4\}$, $A = \{16,9,-5,7,-2,0,4,-7,13\}$, $B = \{-1,6,-8,4,12,13,8,-7\}$, $C = \{7,6,-8,4,-6,-1,-3,15\}$, find $C \cup A$
- (i) $\{16,-8,9,-1,-2,-5,-3,-7,7,-6,6,15,4,0\}$ (ii) $\{13,16,-8,9,-1,-2,-5,-3,-7,7,-6,6,15,4,0,3\}$
- (iii) $\{16,-8,9,-1,-2,-5,-3,-7,7,-6,6,15,4,0,3\}$ (iv) $\{13,16,-8,9,-1,-2,-5,-3,-7,7,-6,6,15,4,0\}$
- (v) $\{13,16,-8,9,-1,-2,-5,-7,7,-6,6,15,4,0,-9\}$
34. If $\mu = \{20,0,4,-9,15,13,12,-1,14,19,-2,16,11,5,9,-8,8,-4,-3,2,1,17,6,-7\}$, $A = \{20,0,4,-9,15,13,12,-1,14,19\}$, $B = \{-2,-1,16,0,11,5,13,9,-8,-9\}$, $C = \{20,8,-9,4,-4,14,11,0,-1\}$, find $A \cup B \cup C$
- (i) $\{20,0,19,-2,14,15,11,13,-9,4,16,-1,5,9,-4,-8,12,-3\}$ (ii) $\{20,0,19,-2,14,15,8,11,13,-9,4,16,-1,5,9,-4,-8,12,-3\}$
- (iii) $\{20,0,19,-2,14,8,11,13,-9,4,16,-1,5,9,-4,-8,12\}$ (iv) $\{20,0,19,-2,14,15,8,11,13,-9,4,16,-1,5,9,-4,-8,12\}$
- (v) $\{20,0,19,-2,14,15,11,13,-9,4,16,-1,5,9,-4,-8,12\}$
35. If $\mu = \{8,2,-2,-9,-7,5,-1,7,14,1,0,-4,9,3,12,4,-3\}$, $A = \{8,2,-2,-9,-7,5,-1\}$, $B = \{7,14,5,2,1,-9,-7\}$, $C = \{-1,0,-7,-4,7,9,3,12,1\}$, find $(A \cup B) \cup C$
- (i) $\{7,14,-9,0,9,-7,1,2,5,-1,8,3,12,-2,-4,-3\}$ (ii) $\{7,14,-9,0,9,-7,1,2,5,-1,8,3,12,-2,-4\}$
- (iii) $\{7,14,-9,0,9,-7,1,2,-1,8,3,12,-2,-4\}$ (iv) $\{7,14,-9,0,9,-7,1,2,5,8,3,12,-2,-4\}$
- (v) $\{7,14,-9,0,9,-7,1,2,5,8,3,12,-2,-4,-3\}$
36. If $\mu = \{9,8,-1,-8,10,11,-4,-9,5,-7,13,1,7,-5,-6,-3,4,12,2,0,3\}$, $A = \{9,8,-1,-8,10,11\}$, $B = \{-4,8,-1,-9,5,-7,-8,13,1\}$, $C = \{7,-4,-8,8,13,-7,9,-1\}$, find $A \cup (B \cup C)$
- (i) $\{1,5,-4,7,9,11,8,-1,10,13,-9,-8,-7\}$ (ii) $\{1,5,-4,7,9,11,8,-1,10,13,-9,-7\}$
- (iii) $\{1,5,-4,9,11,8,-1,10,13,-9,-8,-7\}$ (iv) $\{1,5,-4,7,9,11,8,-1,10,13,-9,-8,-7,-6\}$
- (v) $\{1,5,-4,9,11,8,-1,10,13,-9,-8,-7,-6\}$
37. If $\mu = \{-9,2,15,11,6,8,-8,-3,0,-5,-6,-1,1,9,-2,10,13,-7,-4,7,5,3,12,4,14\}$, $A = \{-9,2,15,11,6,8\}$, $B = \{-8,-3,0,-5,15,-6,-1,2,1,9\}$, $C = \{1,-5,8,-2,-1,10,13,6,-7\}$, find $A \cap B$
- (i) $\{2,7\}$ (ii) $\{2,15,7\}$ (iii) $\{2\}$ (iv) $\{2,15\}$ (v) $\{15,4\}$
38. If $\mu = \{0,-4,-9,10,12,13,2,8,-1,4,1,-3,11,-5,-8,-6,-7,7,-2\}$, $A = \{0,-4,-9,10,12,13,2\}$, $B = \{2,8,0,-1,4,-9,10\}$, $C = \{2,13,12,1,-3,11,4,10\}$, find $B \cap C$
- (i) $\{2,10,13\}$ (ii) $\{2,4,10,13\}$ (iii) $\{2,4,10\}$ (iv) $\{2,10\}$ (v) $\{4,10\}$
39. If $\mu = \{1,-4,11,2,10,-3,-9,-6,-5,5,-7,4,6,0,8,-8,13,9,-2,7,-1,3\}$, $A = \{1,-4,11,2,10,-3,-9\}$, $B = \{-6,-5,-9,5,-4,-7\}$, $C = \{-3,2,4,11,6,5,-9,10,0,8\}$, find $C \cap A$
- (i) $\{2,10,-3,-9,11,0\}$ (ii) $\{2,10,-3,11,0\}$ (iii) $\{2,10,-3,-9,11\}$ (iv) $\{10,-3,-9,11\}$ (v) $\{2,10,-3,11\}$
40. If $\mu = \{0,-7,12,-4,6,7,-9,-5,13,-3,-6,10,8,9,3,11,2,1,5,4,-2\}$, $A = \{0,-7,12,-4,6,7,-9,-5\}$, $B = \{13,-7,6,-3,-6,10,12,8\}$, $C = \{13,-9,-7,7,9,3\}$, find $A \cap B \cap C$
- (i) $\{-7,13\}$ (ii) $\{-7\}$ (iii) $\{\}$ (iv) $\{0\}$ (v) $\{13\}$
41. If $\mu = \{16,13,2,5,-5,15,0,1,-1,14,12,-7,-9,-6,8,10,-4,3,7,9,6,-2,11,-3,4\}$, $A = \{16,13,2,5,-5,15,0,1,-1\}$, $B = \{15,14,12,1,-7,-9,-6,-5,8\}$, $C = \{10,5,2,-4,8,14,13\}$, find $(A \cap B) \cap C$
- (i) $\{14\}$ (ii) $\{11\}$ (iii) $\{\}$
42. If $\mu = \{-3,-1,0,-8,8,19,4,-7,5,6,18,-4,-2,15,-5,1,12,11,14,3,10,9\}$, $A = \{-3,-1,0,-8,8,19,4,-7\}$, $B = \{5,-8,-7,6,18,-1,4,-4,8,0\}$, $C = \{-2,5,6,15,-5,-7,19,1,-1,-4\}$, find $A \cap (B \cap C)$
- (i) $\{-7,-1,-2\}$ (ii) $\{-7,-1\}$ (iii) $\{-1\}$ (iv) $\{-1,12\}$ (v) $\{-1,-2\}$

43. If $\mu = \{-9, 3, 13, -3, 11, 10, -1, 5, 14, 1, 6, 9, -4, 2, 0, 4, -6, 8, 7, -5, -7, 12\}$, $A = \{-9, 3, 13, -3, 11, 10, -1, 5, 14\}$, $B = \{1, 6, 9, 11, -4, -1, 13, 2, -3\}$, $C = \{9, 11, 14, 10, 0, -3\}$, find $A \cup (B \cap C)$
- (i) $\{9, 5, 11, 3, -1, 14, -9, -3, 13\}$ (ii) $\{9, 5, 11, 3, -1, 14, -9, 10, -3, 13, 0\}$ (iii) $\{5, 11, 3, -1, 14, -9, 10, -3, 13\}$
- (iv) $\{9, 5, 11, 3, -1, 14, -9, -3, 13, 0\}$ (v) $\{9, 5, 11, 3, -1, 14, -9, 10, -3, 13\}$
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44. If $\mu = \{-5, -6, 4, 9, -4, 0, 6, -9, 13, 3, 8, 12, -2, 10, -3, 1, 7, -7, 2, 11\}$, $A = \{-5, -6, 4, 9, -4, 0, 6\}$, $B = \{-9, 4, 13, 3, 8, 12\}$, $C = \{-5, 12, 0, 13, -2, 10, -3, 9, 1\}$, find $B \cup (C \cap A)$
- (i) $\{-9, 12, -5, 0, 3, 13, 8, 9\}$ (ii) $\{-9, 12, -5, 0, 3, 4, 13, 8, 9\}$ (iii) $\{-9, 12, -5, 0, 3, 4, 13, 8, 9, 10\}$
- (iv) $\{-9, 12, -5, 0, 3, 13, 8, 9, 10\}$ (v) $\{-9, 12, -5, 0, 3, 4, 13, 8, 1\}$
-
45. If $\mu = \{0, 4, 6, 9, 10, -5, 2, 12, 14, 15, 19, 8, -2, -1, 1, 18, -3, 3, 5, 13, -4, -6, -9, -7, 17\}$, $A = \{0, 4, 6, 9, 10, -5, 2, 12\}$, $B = \{14, 15, 19, 8, -2, 4, 9, 12, -1, 6\}$, $C = \{1, 0, 18, 9, -3, 3, -1, -2, 15, 5\}$, find $C \cup (A \cap B)$
- (i) $\{-2, -1, 1, 0, 12, 3, -3, 18, 15, 5, 4, 6, 9\}$ (ii) $\{-2, -1, 1, 0, 12, 3, -3, 15, 5, 4, 6, 9\}$ (iii) $\{-2, -1, 1, 0, 12, 3, -3, 18, 15, 4, 6, 9\}$
- (iv) $\{-2, -1, 1, 0, 12, 3, -3, 15, 5, 4, 6, 9, -4\}$ (v) $\{-2, -1, 1, 0, 12, 3, -3, 18, 15, 5, 4, 6, 9, -4\}$
-
46. If $\mu = \{7, -9, 0, -5, 12, -6, -3, -4, 13, 5, 6, 10, -7, 1, -2, 15, 2, 11, 9, 14\}$, $A = \{7, -9, 0, -5, 12, -6, -3\}$, $B = \{-9, -4, 13, 5, 6, -6, 12, 10, -7\}$, $C = \{10, 6, 12, 1, 13, -2, -6, 15\}$, find $A \cap (B \cup C)$
- (i) $\{12, -9, -6\}$ (ii) $\{12, -9, -6, -3\}$ (iii) $\{12, -9\}$ (iv) $\{-9, -6, -3\}$ (v) $\{-9, -6\}$
-
47. If $\mu = \{-2, 15, -7, 8, 13, -9, -5, 14, -1, 1, -4, -8, 9, 2, 5, -6, 3, 11, 7, 12, 10\}$, $A = \{-2, 15, -7, 8, 13, -9, -5, 14, -1, 1\}$, $B = \{8, -2, -4, -5, -8, 14, 9, 15\}$, $C = \{2, 5, -6, 3, 9, -5\}$, find $B \cap (C \cup A)$
- (i) $\{-2, 9, 14, 15, -5\}$ (ii) $\{-2, 9, 8, 14, -5\}$ (iii) $\{-2, 9, 8, 14, 15, -5, 12\}$ (iv) $\{-2, 9, 8, 14, -5, 12\}$ (v) $\{-2, 9, 8, 14, 15, -5\}$
-
48. If $\mu = \{10, -1, 15, -7, -5, -3, 14, -8, 2, 9, 7, -6, 13, 12, 8, -9, -2, 0, 3, 1, 4, 5\}$, $A = \{10, -1, 15, -7, -5, -3\}$, $B = \{14, -5, -8, 2, 9, 7, -6, 13\}$, $C = \{-5, 12, -6, 8, -8, 10, -9, -2, 14, -7\}$, find $C \cap (A \cup B)$
- (i) $\{14, 10, -7, -6, -8\}$ (ii) $\{14, 10, -6, -8, -5, -2\}$ (iii) $\{14, 10, -7, -6, -8, -5, -2\}$ (iv) $\{14, 10, -7, -6, -8, -5\}$
- (v) $\{14, 10, -6, -8, -5\}$
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49. If $\mu = \{5, 10, 11, -6, -9, 13, -3, 12, 3, -5, 0, 8, 6, 9, 2, -2, 1, 4, 15, 7, 14, -8, -1\}$, $A = \{5, 10, 11, -6, -9, 13, -3, 12, 3, -5\}$, $B = \{0, 8, 11, 6, 12, 9\}$, $C = \{2, 13, -2, 6, 9, 12, 1, 4\}$, find $(A \cup B) \cap (A \cup C)$
- (i) $\{9, -3, 13, -9, 10, 12, 3, 5, -5, -6, 11, 6\}$ (ii) $\{9, -3, 13, -9, 10, 12, 3, 5, -5, -6, 11, 6, 15\}$
- (iii) $\{9, -3, 13, -9, 12, 3, 5, -5, -6, 11, 6\}$ (iv) $\{9, -3, 13, -9, 10, 12, 5, -5, -6, 11, 6\}$ (v) $\{9, -3, 13, -9, 10, 12, 5, -5, -6, 11, 6, 15\}$
-
50. If $\mu = \{12, 9, 8, 4, 13, 5, -7, 11, 2, 15, 14, 6, -1, -3, -5, -2, -8, 10, 7, -9, 1\}$, $A = \{12, 9, 8, 4, 13, 5\}$, $B = \{-7, 11, 13, 2, 15, 8, 12, 4, 5\}$, $C = \{14, 12, 6, 11, 15, 5, 2, -1, -7\}$, find $(B \cup C) \cap (B \cup A)$
- (i) $\{13, -7, 15, 4, 11, 8, 12, 5, 1\}$ (ii) $\{13, -7, 2, 15, 4, 11, 8, 12, 5, 1\}$ (iii) $\{13, -7, 2, 15, 4, 11, 8, 12, 5\}$
- (iv) $\{13, -7, 2, 15, 11, 8, 12, 5\}$ (v) $\{13, -7, 15, 4, 11, 8, 12, 5\}$
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51. If $\mu = \{-3, 10, 3, 8, 2, -8, 15, 17, -4, 4, 7, -2, 5, 1, 6, -1, 13, -6, 11, 0, 9, 16, -7, 14, 18\}$, $A = \{-3, 10, 3, 8, 2, -8, 15, 17, -4, 4\}$, $B = \{7, -2, 2, 10, 5, 1, 6\}$, $C = \{-1, -4, 13, 4, -6, 11, 8, 0, 3, -8\}$, find $(C \cup A) \cap (C \cup B)$
- (i) $\{-8, 2, 13, 4, -1, 11, 3, 10, -4, 0, -6, 8\}$ (ii) $\{-8, 2, 13, 4, -1, 11, 3, 10, -4, 0, -6, 8, 6\}$ (iii) $\{-8, 2, 13, 4, -1, 3, 10, -4, 0, -6, 8\}$
- (iv) $\{-8, 2, 13, 4, -1, 3, 10, -4, 0, -6, 8, 6\}$ (v) $\{-8, 2, 13, -1, 11, 3, 10, -4, 0, -6, 8\}$
-
52. If $\mu = \{-5, 12, -6, -7, 7, 3, 6, -9, -1, 10, 0, -8, 9, 2, -2, 14, 8, 1, 4, -3, -4, 11, 13\}$, $A = \{-5, 12, -6, -7, 7, 3, 6, -9, -1\}$, $B = \{10, 0, -1, -7, 7, -9, -6, -8\}$, $C = \{12, 0, 9, 3, 2, -8\}$, find $(A \cap B) \cup (A \cap C)$
- (i) $\{7, -9, -7, -6, -1, 12\}$ (ii) $\{7, -9, -7, 3, -6, -1, 12\}$ (iii) $\{7, -9, -7, 3, -1, 12, -8\}$ (iv) $\{7, -9, -7, 3, -1, 12\}$
- (v) $\{7, -9, -7, 3, -6, -1, 12, -8\}$

53. If $\mu = \{10, 8, 15, 3, 16, 17, 0, -8, -1, 7, -2, 1, 11, 14, 5, -4, 12, -9, -3, 9, 18, 2, 13, -5\}$, $A = \{10, 8, 15, 3, 16, 17, 0, -8, -1, 7\}$, $B = \{-2, 15, 3, 1, 11, -1, 14, 7, -8\}$, $C = \{3, -2, 15, -1, 5, 17, -4, 7, 12\}$, find $(B \cap C) \cup (B \cap A)$
- (i) $\{-1, 7, -8, -2, 3\}$ (ii) $\{-1, 7, -8, -2, 3, 15, 18\}$ (iii) $\{-1, 7, -8, -2, 3, 15\}$ (iv) $\{-1, 7, -8, -2, 3, 18\}$ (v) $\{-1, 7, -2, 3, 15\}$
54. If $\mu = \{1, 3, 5, -5, -3, 8, -4, 11, 0, -7, -2, 2, -6, 13, 7, 12, 6, -9, 4, -8, 10\}$, $A = \{1, 3, 5, -5, -3, 8, -4, 11, 0\}$, $B = \{-7, -5, -2, 5, 1, 0\}$, $C = \{-3, 3, 2, -6, -5, 8, 13\}$, find $(C \cap A) \cup (C \cap B)$
- (i) $\{3, 8, -3\}$ (ii) $\{3, 8, -5, -3\}$ (iii) $\{3, -5, -3, 10\}$ (iv) $\{3, 8, -3, 1\}$ (v) $\{3, 8, -5, -3, 1\}$

Assignment Key

1) (iv)	2) (iii)	3) (ii)	4) (v)	5) (i)	6) (iii)
7) (ii)	8) (ii)	9) (iii)	10) (v)	11) (iii)	12) (ii)
13) (ii)	14) (v)	15) (i)	16) (iii)	17) (v)	18) (iii)
19) (i)	20) (ii)	21) (i)	22) (v)	23) (i)	24) (iii)
25) (iv)	26) (ii)	27) (iv)	28) (iv)	29) (iii)	30) (i)
31) (iii)	32) (iii)	33) (iv)	34) (iv)	35) (ii)	36) (i)
37) (iv)	38) (iii)	39) (iii)	40) (ii)	41) (iii)	42) (ii)
43) (v)	44) (ii)	45) (i)	46) (i)	47) (v)	48) (iv)
49) (i)	50) (iii)	51) (i)	52) (ii)	53) (iii)	54) (ii)