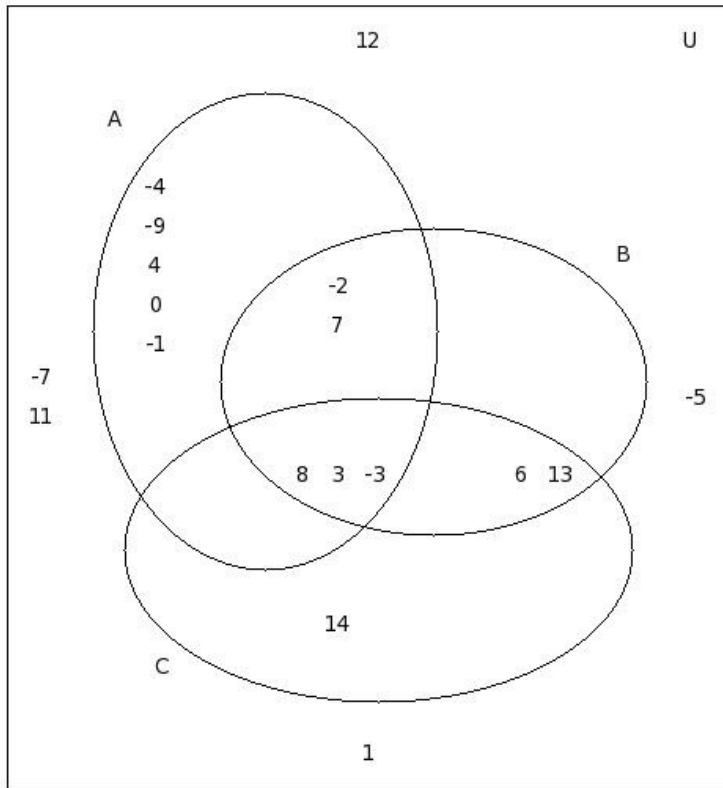


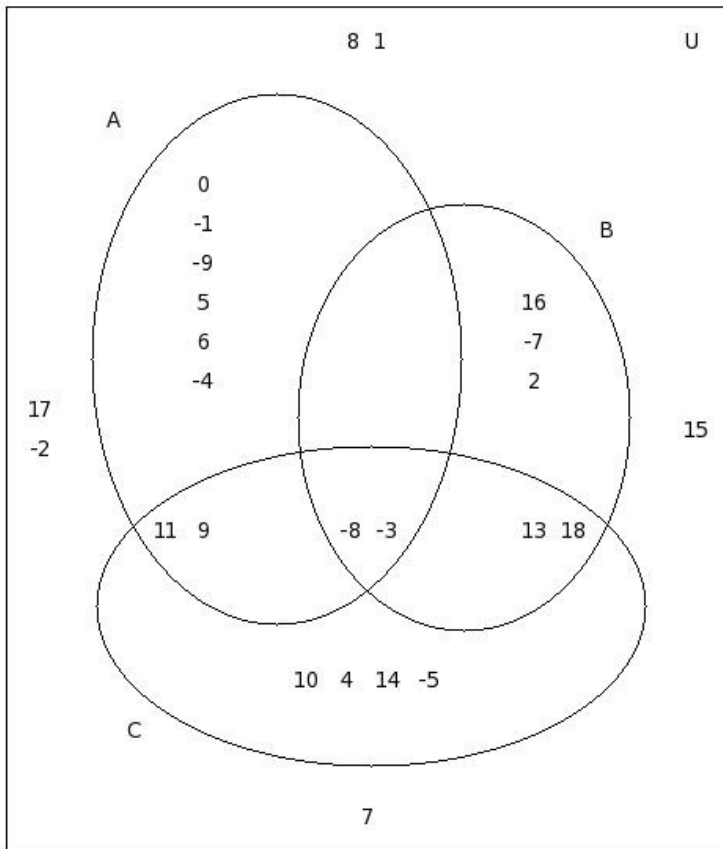


1. Find $(B \cup C)'$



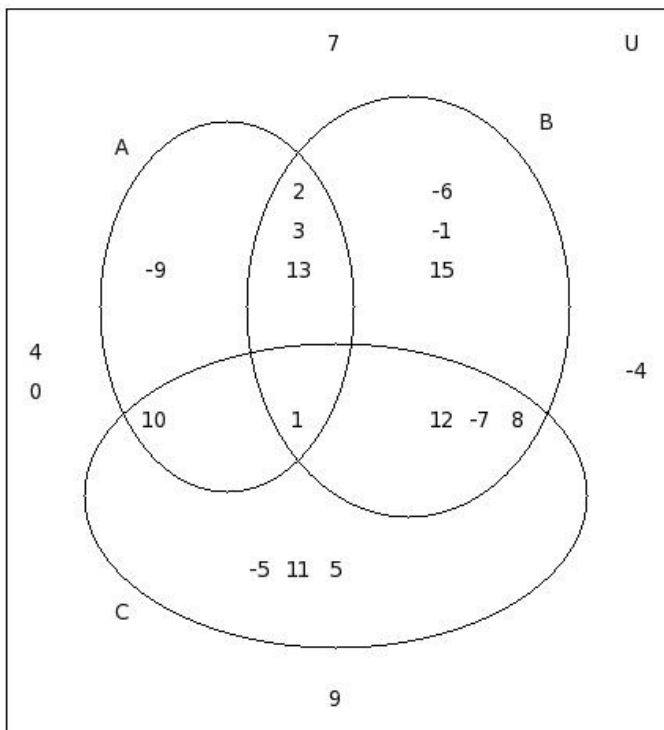
- (i) $\{11, -9, -7, 0, 1, -1, -5, 12, 4, 3\}$ (ii) $\{11, -4, -7, 0, 1, -1, -5, 12, 4\}$ (iii) $\{11, -4, -9, -7, 0, 1, -1, 12, 4, 6\}$
(iv) $\{11, -4, -9, -7, 0, 1, -1, -5, 12, 4, 3\}$ (v) $\{11, -4, -9, -7, 0, 1, -1, -5, 12, 4\}$

2. Find $(C \cup A)'$



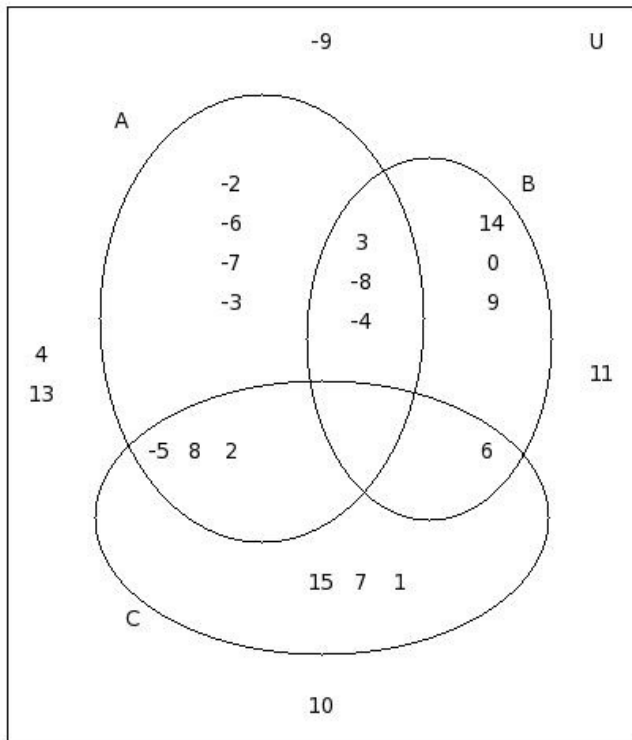
- (i) $\{8, -2, 2, 17, -7, 16, 15, 7, 1\}$ (ii) $\{8, -2, 2, 17, 16, 15, 7, 1, 5\}$ (iii) $\{8, -2, 2, 17, -7, 16, 7, 1\}$
 (iv) $\{8, -2, 17, -7, 16, 15, 7, 1, 14\}$ (v) $\{8, -2, 2, 17, -7, 16, 15, 7, 1, 14\}$

3. Find $(A \cup B \cup C)'$



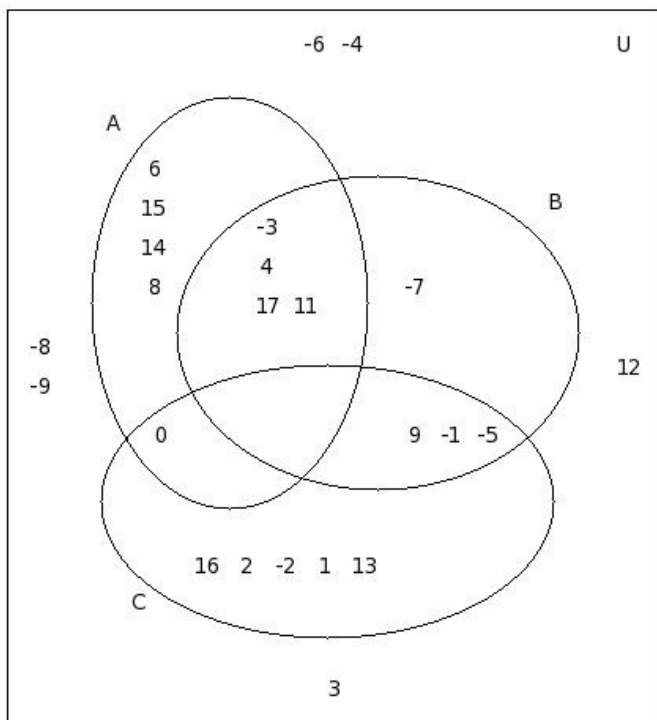
- (i) $\{4, 7, 0, 9, -4\}$ (ii) $\{4, 7, 0, 9, -4, 15\}$ (iii) $\{7, 0, 9, -4, 13\}$ (iv) $\{4, 7, 0, -4, 15\}$ (v) $\{4, 7, 0, 9\}$

4. Find $(A \cap B)'$



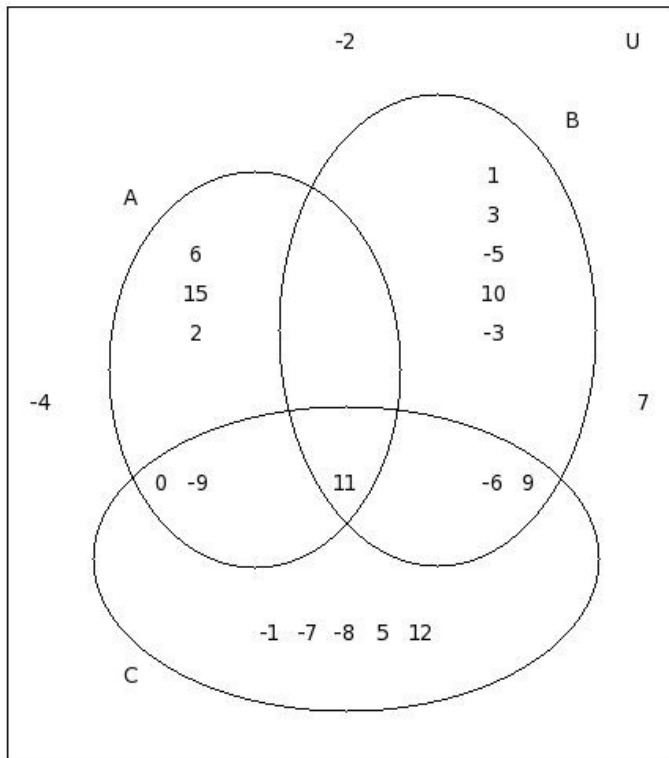
- (i) $\{-5, 13, 15, 11, 8, -9, 10, 1, -2, -7, 6, 7, -6, -3, 0, 4, 14, 2, -8\}$ (ii) $\{-5, 13, 15, 11, 8, -9, 10, 9, 1, -2, -7, 6, 7, -6, -3, 0, 4, 14, 2, -4\}$
 (iii) $\{-5, 13, 15, 11, 8, -9, 10, 9, 1, -2, -7, 7, -6, -3, 0, 4, 14, 2, -4\}$ (iv) $\{-5, 13, 15, 11, 8, -9, 10, 9, 1, -2, -7, 6, 7, -6, -3, 0, 4, 14, 2\}$
 (v) $\{-5, 13, 15, 11, 8, -9, 10, 1, -2, -7, 6, 7, -6, -3, 0, 4, 14, 2\}$

5. Find $(B \cap C)'$



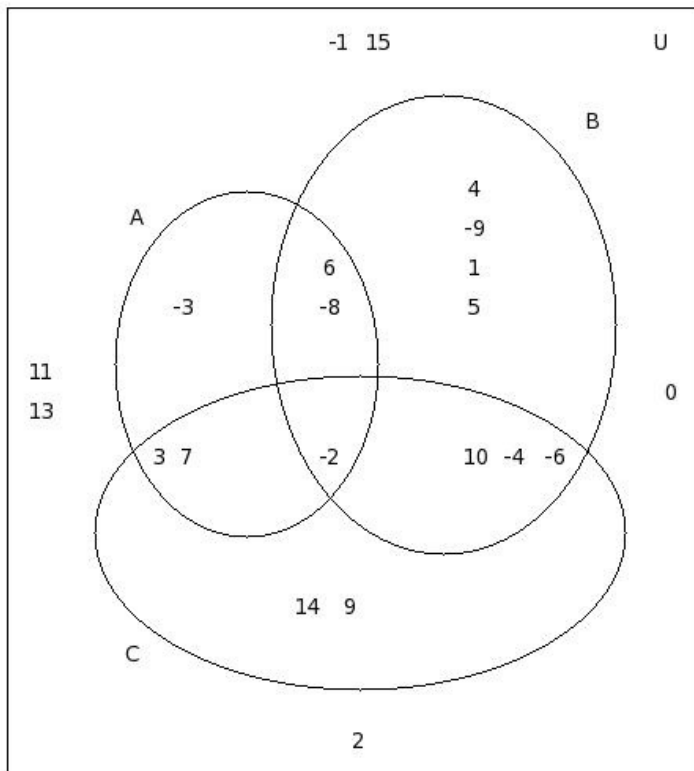
- (i) $\{16, 17, 14, 6, -3, 2, 1, -6, 0, -7, 8, 15, 4, 11, -8, 13, -2, 12, 3, -9, -4, -5\}$
 (ii) $\{17, 14, 6, -3, 2, 1, -6, 0, -7, 8, 15, 4, 11, -8, 13, -2, 12, 3, -9, -4, -5\}$
 (iii) $\{16, 17, 14, 6, -3, 2, 1, -6, 0, -7, 8, 15, 4, 11, -8, 13, -2, 12, -9, -4\}$
 (iv) $\{16, 17, 14, 6, -3, 2, 1, -6, 0, -7, 8, 15, 4, 11, -8, 13, -2, 12, 3, -9, -1\}$
 (v) $\{16, 17, 14, 6, -3, 2, 1, -6, 0, -7, 8, 15, 4, 11, -8, 13, -2, 12, 3, -9, -4\}$

6. Find $(C \cap A)'$



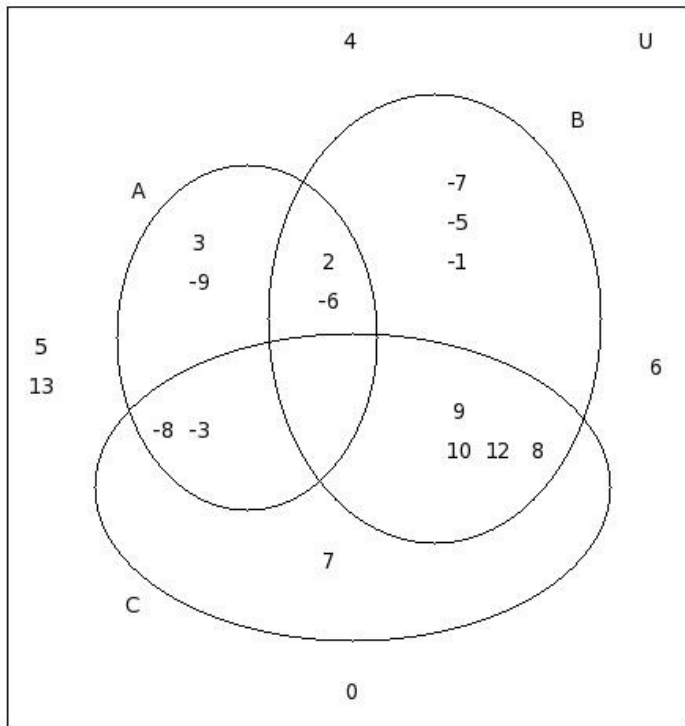
- (i) $\{-7, 3, -3, 10, -4, -2, 15, 5, 1, -6, -1, -8, -5, 9, 7, 12, 6, 11\}$ (ii) $\{2, -7, 3, -3, 10, -4, -2, 15, 5, 1, -6, -1, -8, -5, 9, 7, 12, 6, -9\}$
 (iii) $\{2, -7, 3, -3, 10, -4, -2, 15, 5, 1, -6, -1, -8, -5, 9, 7, 12, -9\}$ (iv) $\{2, -7, 3, -3, 10, -2, 15, 5, 1, -6, -1, -8, -5, 9, 7, 12, 6\}$
 (v) $\{2, -7, 3, -3, 10, -4, -2, 15, 5, 1, -6, -1, -8, -5, 9, 7, 12, 6\}$

7. Find $(A \cap B \cap C)'$



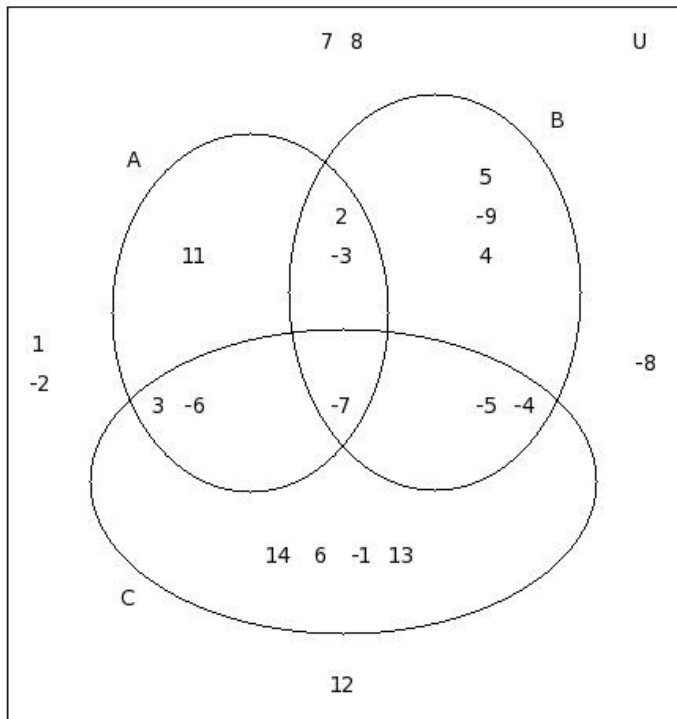
- (i) $\{4, 3, -3, -4, 15, 6, 5, 0, 14, 9, -8, 11, 1, -9, 13, -1, 2, 7, -6, 10\}$ (ii) $\{3, -3, -4, 15, 6, 5, 0, 14, 9, -8, 11, 1, -9, 13, -1, 2, 7, -6, 10\}$
 (iii) $\{4, 3, -3, -4, 15, 6, 5, 0, 14, 9, -8, 11, 1, -9, 13, -1, 2, 7, -6, 10, -2\}$
 (iv) $\{4, 3, -3, -4, 6, 5, 0, 14, 9, -8, 11, 1, -9, 13, -1, 2, 7, -6, 10, -2\}$ (v) $\{4, 3, -3, -4, 15, 6, 5, 0, 9, -8, 11, 1, -9, 13, -1, 2, 7, -6, 10, -2\}$

8. Find $(A - (A \cap (B \cap C)))'$



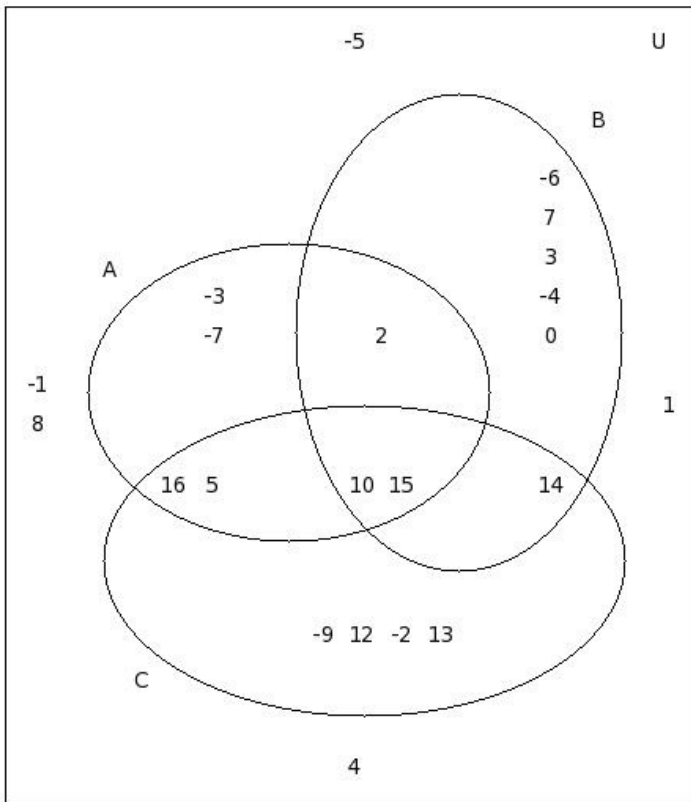
- (i) $\{-5, 13, 4, 0, 12, -7, 6, 9, -1, 10, 5, 7, 2\}$ (ii) $\{-5, 13, 4, 0, 8, 12, -7, 6, 9, -1, 10, 5, 7\}$
 (iii) $\{-5, 13, 4, 0, 8, 12, -7, 6, 9, -1, 10, 5, 7, -6\}$ (iv) $\{-5, 13, 4, 0, 8, 12, -7, 6, 9, -1, 5, 7, -6\}$
 (v) $\{-5, 13, 4, 0, 8, 12, -7, 9, -1, 10, 5, 7\}$

9. Find $(B - (A \cap (B \cap C)))'$



- (i) $\{-8, 14, 7, 13, 3, 1, 12, -7, 11, -1, -6, -2, 6, 8, -5\}$ (ii) $\{-8, 14, 7, 13, 3, 1, -7, 11, -1, -6, -2, 6, 8\}$
 (iii) $\{-8, 14, 7, 13, 3, 1, 12, -7, 11, -1, -6, 6, 8, -5\}$ (iv) $\{-8, 14, 7, 13, 3, 1, 12, 11, -1, -6, -2, 6, 8, -9\}$
 (v) $\{-8, 14, 7, 13, 3, 1, 12, -7, 11, -1, -6, -2, 6, 8\}$

10. Find $(C - (A \cap (B \cap C)))'$



- (i) $\{8, -6, -1, 10, 3, 0, -7, 2, -3, -4, -5, 7, 15, 4, 1\}$ (ii) $\{8, -6, -1, 10, 3, 0, -7, 2, -3, -4, 7, 15, 4, 1, 16\}$
 (iii) $\{8, -6, 10, 3, 0, -7, 2, -3, -4, -5, 7, 15, 4, 1, 13\}$ (iv) $\{8, -6, 10, 3, 0, -7, 2, -3, -4, -5, 7, 15, 4, 1\}$
 (v) $\{8, -6, -1, 10, 3, 0, -7, 2, -3, -4, -5, 7, 15, 4, 1, 16\}$

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

- (i) $\{-9, 9, 11, 3, -4, 10, 12, 5, 0, 6, 2, 7, -5, -2, 8\}$ (ii) $\{-9, 9, 11, 3, -4, 10, 12, 5, 0, 2, 7, -5, -2, 8, 4\}$
 (iii) $\{-9, 9, 11, 3, -4, 10, 12, 5, 0, 2, 7, -5, -2, 8\}$ (iv) $\{-9, 9, 11, 3, -4, 10, 12, 5, 0, 6, 2, 7, -5, -2, 8, 4\}$
 (v) $\{-9, 9, 11, -4, 10, 12, 5, 0, 6, 2, 7, -5, -2, 8\}$

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

- (i) $\{4, 5, -5, 1, 10, 8, -3, 3, 12, 7, 0, 14, 15, 9, 2, 13, -4\}$ (ii) $\{4, 5, -5, 1, 10, 8, -3, 3, 7, 0, 14, 15, 9, 2, 13\}$
 (iii) $\{4, 5, -5, 1, 10, 8, -3, 3, 12, 7, 0, 14, 15, 9, 2, 13\}$ (iv) $\{4, 5, -5, 1, 10, 8, 3, 12, 7, 0, 14, 15, 9, 2, 13\}$
 (v) $\{4, 5, -5, 1, 10, 8, 3, 12, 7, 0, 14, 15, 9, 2, 13, -4\}$

13. If $\mu = \{10, 9, 6, -9, 2, 11, 12, -5, 1, -4, -1, 13, 5, 16, 14, -6, -7, 7, 15, -8, 4, 3, -3\}$, $A = \{10, 9, 6, -9, 2, 11, 12, -5\}$, $B = \{1, 6, 9, -4, -1, 13, 5, 16, 14\}$, $C = \{-6, 14, 12, 10, -7, 7, 2, 6\}$, find C'

- (i) $\{11, -5, 4, 3, 1, -4, 9, 13, -1, -9, 16, 15, 5, -8, -3\}$ (ii) $\{11, -5, 4, 3, 1, -4, 9, 13, -1, -9, 16, 15, 5, -8, -3, 14\}$
 (iii) $\{11, -5, 3, 1, -4, 9, 13, -1, -9, 16, 15, 5, -8, -3, 14\}$ (iv) $\{11, -5, 3, 1, -4, 9, 13, -1, -9, 16, 15, 5, -8, -3\}$
 (v) $\{11, -5, 4, 3, 1, -4, 9, 13, -1, -9, 15, 5, -8, -3\}$

14. If $\mu = \{-3, 8, 0, 13, 3, -9, -2, -4, 4, -1, 11, 7, 14, 10, -7, 9, 1, 12, 5, 2, -8\}$, $A = \{-3, 8, 0, 13, 3, -9\}$, $B = \{-3, -2, -4, 4, -1, 11, 13, -9, 0\}$, $C = \{-9, 0, 11, 7, 14, 4, 3, 13\}$, find $(A \cup B)'$

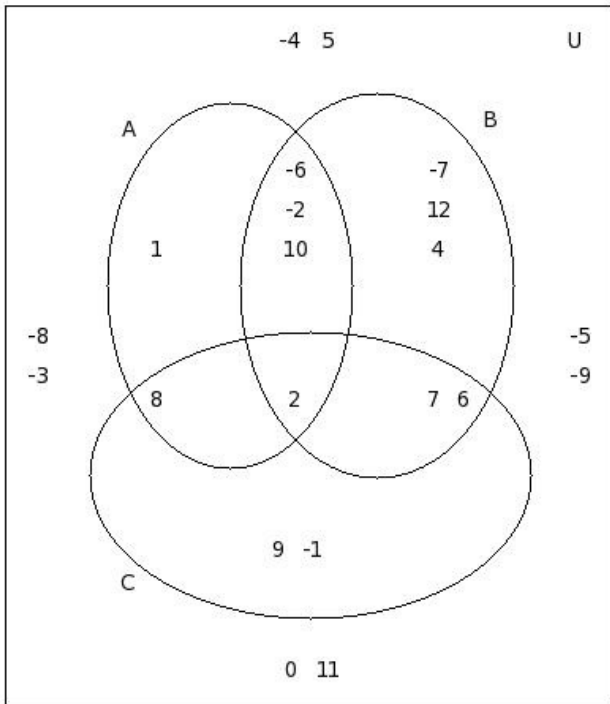
- (i) $\{10, 2, 1, 12, 5, -8, 7, 14, 9\}$ (ii) $\{2, 1, 12, 5, -7, -8, 7, 14, 9\}$ (iii) $\{10, 2, 1, 12, 5, -7, -8, 7, 14, 9\}$
 (iv) $\{2, 1, 12, 5, -7, -8, 7, 14, 9, -1\}$ (v) $\{10, 2, 1, 12, 5, -7, -8, 7, 14, 9, -1\}$

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

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

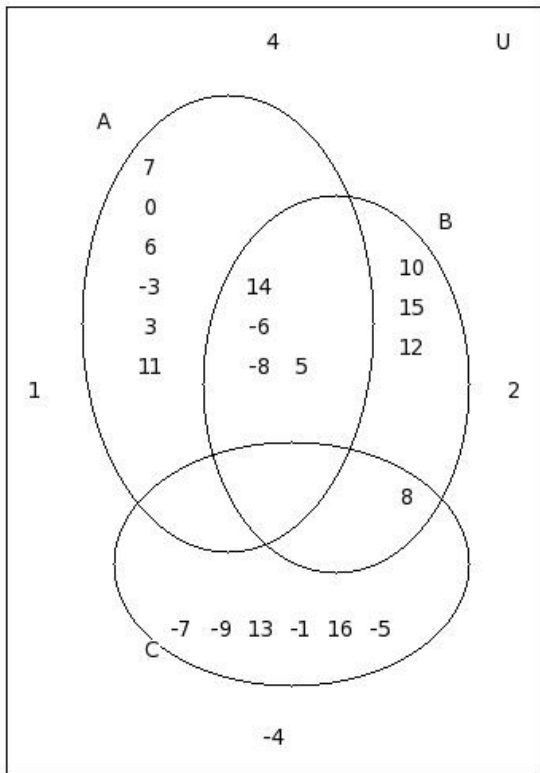
24. If $\mu = \{13,8,11,7,2,3,6,-4,-3,9,-9,-1,15,12,-2,-7,1,4,0,5,10\}$, $A = \{13,8,11,7,2,3,6,-4,-3\}$, $B = \{8,9,2,3,-9,-3\}$, $C = \{-1,13,8,-9,11,9,15,12,-2,-7\}$, find $(C - (A \cap (B \cap C)))'$
- (i) $\{6,8,-3,7,2,4,-4,1,5,0,3,10\}$ (ii) $\{6,8,-3,7,2,4,1,5,0,3,10\}$ (iii) $\{6,8,-3,7,4,-4,1,5,0,3,10\}$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

25. Find A'



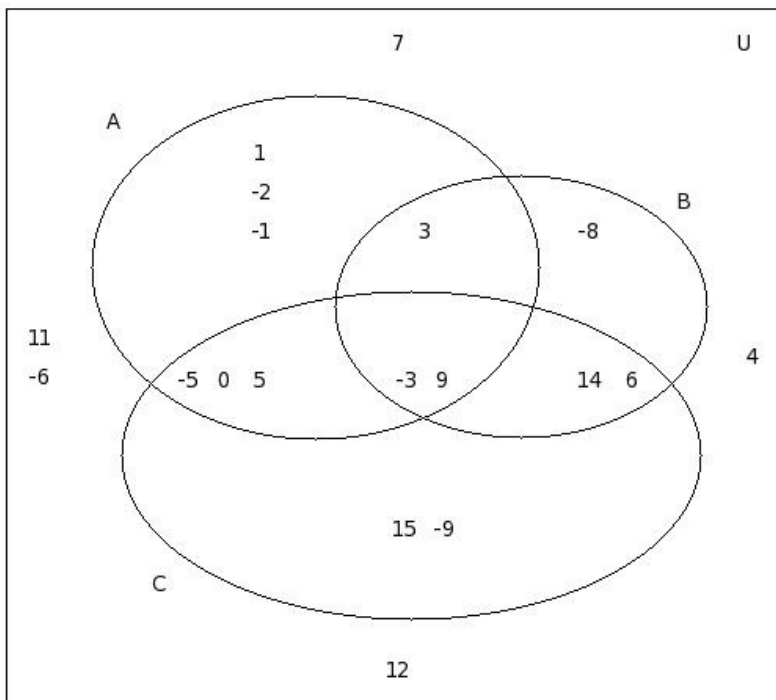
- (i) $\{-1,-3,-7,9,-4,-5,-8,7,11,-9,4,12,0,5,6\}$ (ii) $\{-1,-3,-7,9,-4,-5,-8,7,11,-9,4,12,0,5,6,10\}$
- (iii) $\{-1,-3,-7,-4,-5,-8,7,11,-9,4,12,0,5,6,1\}$ (iv) $\{-1,-3,-7,9,-4,-5,-8,7,11,-9,4,0,5,6\}$
- (v) $\{-1,-3,-7,9,-4,-5,-8,7,11,-9,12,0,5,6,10\}$

26. Find B'



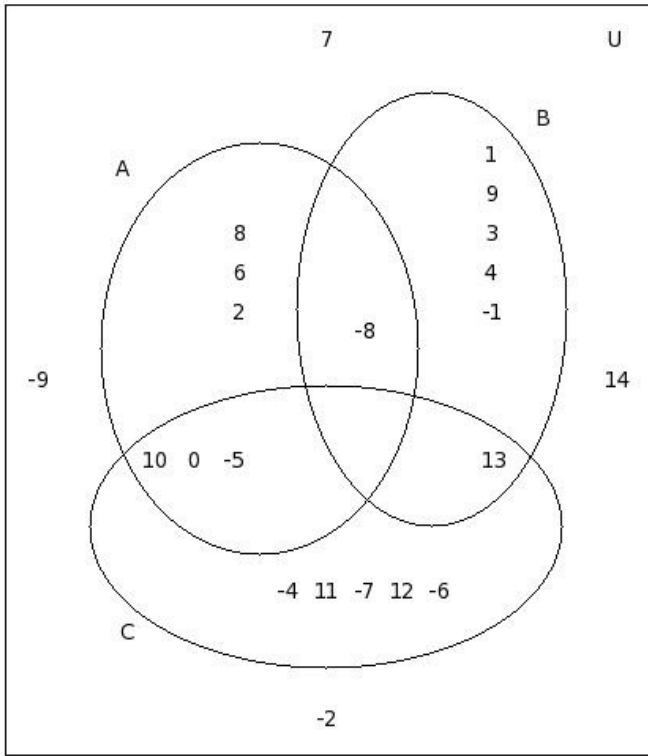
- (i) $\{13, 16, 1, 6, 11, 4, -1, -3, -4, 3, 2, -5, 0, -9, 7, -7, 12\}$ (ii) $\{13, 16, 1, 6, 11, 4, -1, -3, 3, 2, -5, 0, -9, 7, -7, 12\}$
 (iii) $\{13, 16, 1, 6, 11, 4, -1, -3, -4, 3, 2, -5, 0, -9, 7, -7\}$ (iv) $\{13, 16, 1, 6, 11, 4, -1, -3, 3, 2, -5, 0, -9, 7, -7\}$
 (v) $\{13, 16, 1, 6, 11, -1, -3, -4, 3, 2, -5, 0, -9, 7, -7, 10\}$

27. Find C'



- (i) $\{-2, 4, -6, 3, 1, 7, -8, 11, 12\}$ (ii) $\{-2, -1, 4, -6, 1, 7, -8, 11, 12, 9\}$ (iii) $\{-2, -1, 4, -6, 3, 1, 7, -8, 11, 12, 14\}$
 (iv) $\{-2, 4, -6, 3, 1, 7, -8, 11, 12, 14\}$ (v) $\{-2, -1, 4, -6, 3, 1, 7, -8, 11, 12\}$

28. Find $(A \cup B)'$



- (i) $\{-9, -4, -2, 7, 11, 12, 14, -7, 0\}$ (ii) $\{-9, -4, -2, 7, 12, -6, 14, -7\}$ (iii) $\{-4, -2, 7, 11, 12, -6, 14, -7, 13\}$
 (iv) $\{-9, -4, -2, 7, 11, 12, -6, 14, -7, 0\}$ (v) $\{-9, -4, -2, 7, 11, 12, -6, 14, -7\}$

Assignment Key

1) (v)	2) (i)	3) (i)	4) (iv)	5) (v)	6) (v)
7) (i)	8) (ii)	9) (v)	10) (i)	11) (i)	12) (iii)
13) (i)	14) (iii)	15) (v)	16) (ii)	17) (ii)	18) (iv)
19) (v)	20) (iii)	21) (iii)	22) (iv)	23) (ii)	24) (i)
25) (i)	26) (iii)	27) (v)	28) (v)		