



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

14. If $A = \{10, 9, 3, 0\}$ and $B = \{8, 1, 3, 0\}$, then $B - A =$
 (i) $\{8\}$ (ii) $\{\}$ (iii) $\{1, 8\}$ (iv) $\{8, 0, 1\}$ (v) $\{8, 1, 15\}$
15. If $A = \{10, 13, 6, 4, 15\}$ and $B = \{0, 7, 6, 13, 15\}$, then $B - A =$
 (i) $\{7\}$ (ii) $\{19, 0, 7\}$ (iii) $\{6, 7, 0\}$ (iv) $\{7, 0\}$ (v) $\{\}$
16. The symmetric difference of set $A = \{4, 15, 5, 14, 13, 0\}$ and set $B = \{5, 7, 14, 8, 2, 0\}$ is
 (i) $\{4, 15, 13\}$ (ii) $\{8, 7, 2, 4, 15\}$ (iii) $\{2, 8, 7\}$ (iv) $\{13, 8, 2, 15, 4, 7\}$ (v) $\{4, 8, 7, 2, 15, 13, 0\}$
17. If $A = \{7, 5, -4, -1, -6\}$ and $\mu = \{7, 5, -4, -1, -6, -2, -7, 2\}$, find $A \cup A$
 (i) $\{8, 7, -5, -4, -1\}$ (ii) $\{-4, -1, 7, 5, -6\}$ (iii) $\{5, -4, -1, -2, 7\}$ (iv) $\{2, 7, -6, 3, -1, -4, 5\}$ (v) $\{-4, -6, -1, 7\}$
18. If $A = \{-7, 3, -9, 2, 8, -2\}$ and $\mu = \{-7, 3, -9, 2, 8, -2, 0, 1, 7, 9\}$, find $A \cup \emptyset$
 (i) $\{-7, -9, 0, 4, 3, -3\}$ (ii) $\{8, 2, -9, -7, -2, 3\}$ (iii) $\{8, -2, 2, 3, -7\}$ (iv) $\{0, -7, -2, -9, 2, 5, 3, 8\}$ (v) $\{8, 2, -7, -2, 7, -9\}$
19. If $A = \{-9, 1, -8, -4\}$ and $\mu = \{-9, 1, -8, -4, 2, 0, -5\}$, find $A \cup \mu$
 (i) $\{-4, 2, -3, 1, -9, -1, -5\}$ (ii) $\{\}$ (iii) $\{-8, -5, 1, -4, 0, 2, -9\}$ (iv) $\{-9, -4, 2, -5, 1, 0\}$ (v) $\{-8, 5, 2, 0, -9, -4, 1, -5, -1\}$
20. If $A = \{0, 9, 1, -5, -9, 4\}$ and $\mu = \{0, 9, 1, -5, -9, 4, -3, 3, -8, 8\}$, find $A \cap A$
 (i) $\{-4, 4, -5, 1, 9, -14\}$ (ii) $\{-9, 1, 9, 4, 0, -5\}$ (iii) $\{1, 3, 2, 0, 4, -9, 9, -5\}$ (iv) $\{9, 4, -5, 1, -9\}$ (v) $\{-9, 0, 4, -2, 9, 1\}$
21. If $A = \{-8, -5, -1, 7, -6, -7, 6\}$ and $\mu = \{-8, -5, -1, 7, -6, -7, 6, 0, 5, 3, -9\}$, find $A \cap \emptyset$
 (i) $\{0\}$ (ii) $\{3, 0\}$ (iii) $\{\}$ (iv) $\{4\}$
22. If $A = \{-9, -3, 1, -7, 0, -5, -6\}$ and $\mu = \{-9, -3, 1, -7, 0, -5, -6, 4, -2, 7, -8\}$, find $A \cap \mu$
 (i) $\{-4, -5, 0, -8, 1, -13, -7\}$ (ii) $\{-7, -9, 0, -5, -6, -3, 5\}$ (iii) $\{-3, 1, -7, 5, -9, -5, -6, 2, 0\}$ (iv) $\{-9, -6, -7, -5, 1, -3, 0\}$
 (v) $\{-6, -3, -7, -9, -5, 0\}$
23. If $A = \{1, 4, -8, -1, 8, 7, -7\}$ and $\mu = \{1, 4, -8, -1, 8, 7, -7, -6, -2, 6, -5\}$, find A'
 (i) $\{-2, -6, -5, 6\}$ (ii) $\{0, 6, -10, -3\}$ (iii) $\{6, -6, -2\}$ (iv) $\{-6, -2, 5, 1, 6, -5\}$ (v) $\{-5, -2, 5, -6\}$
24. If $A = \{-4, 5, 4\}$ and $\mu = \{-4, 5, 4, 1, 3\}$, find $A \cup A'$
 (i) $\{4, 1, 3, -4\}$ (ii) $\{2, 5, 4, -3, 3\}$ (iii) $\{-4, 3, 5, 1, 4\}$ (iv) $\{4, 3, 5, -4, 1, 2, -1\}$ (v) $\{4, 3, 5, 1, -5\}$
25. If $A = \{4, -4, 6, 3\}$ and $\mu = \{4, -4, 6, 3, 0, 7, -1\}$, find $A \cap A'$
 (i) $\{1\}$ (ii) $\{\}$ (iii) $\{4\}$ (iv) $\{2, 1\}$
26. If $A = \{8, 0, 9, -9\}$ and $\mu = \{8, 0, 9, -9, 2, -7, -5\}$, find $(A')'$
 (i) $\{2, 8, 4, 9, 0, -9\}$ (ii) $\{-6, 9, 0, 8\}$ (iii) $\{-9, 8, 0, 9\}$ (iv) $\{-9, 9, 0\}$ (v) $\{10, 6, -4, 0\}$
27. If $\mu = \{-8, 9, -3, -1, 15, -9, 6, -6, 0, 16, 5, 1, 14, -5, -7, -4, 8, 13, 11, 2, 7, 12, -2, 4, 10\}$, $A = \{-8, 9, -3, -1, 15, -9, 6, -6, 0, 16\}$, $B = \{5, 1, 14, -5, -6, -7, -4\}$, $C = \{-8, 5, 8, -7, 16, 13, -1, 6\}$, find $A \cap B \cap C$
 (i) $\{\}$ (ii) $\{-5\}$ (iii) $\{11\}$
28. If $\mu = \{-5, 13, 5, 6, -9, -4, 1, 3, -6, 12, 8, -2, -3, 7, 0, -7, 4, -1, -8\}$, $A = \{-5, 13, 5, 6, -9, -4, 1, 3, -6, 12\}$, $B = \{8, -2, 3, 6, -3, 12\}$, $C = \{-3, 7, 0, -7, 6, -2\}$, find $A \cup (B \cap C)$
 (i) $\{13, -5, -2, -3, 12, 5, -9, -4, 3, -6, 1\}$ (ii) $\{6, 13, -5, -2, -3, 12, 5, -9, -4, 3, -6, 1\}$ (iii) $\{6, -5, -2, -3, 12, 5, -9, -4, 3, -6, 1\}$
 (iv) $\{6, 13, -5, -2, -3, 12, 5, -9, -4, 3, -6, 1, -1\}$ (v) $\{6, -5, -2, -3, 12, 5, -9, -4, 3, -6, 1, -1\}$

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

Assignment Key

1) (iv)	2) (i)	3) (iii)	4) (iii)	5) (iii)	6) (v)
7) (i)	8) (iii)	9) (iv)	10) (ii)	11) (v)	12) (v)
13) (iii)	14) (iii)	15) (iv)	16) (iv)	17) (ii)	18) (ii)
19) (iii)	20) (ii)	21) (iii)	22) (iv)	23) (i)	24) (iii)
25) (ii)	26) (iii)	27) (i)	28) (ii)	29) (i)	30) (i)
31) (v)	32) (i)	33) (iv)			