



1. If $A = \{2,4,5\}$ and $B = \{4,1,2\}$, then $A \cup B =$

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

2. If $A = \{5,3,6,10\}$ and $B = \{3,9,0,1\}$, then $A \cup B =$

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

3. If $A = \{3,4,10,11,8\}$ and $B = \{9,4,10,15,3\}$, then $A \cup B =$

- (i) $\{3,15,9,4,8,10\}$ (ii) $\{9,15,4,3,16,10,11,8\}$ (iii) $\{11,8,10,9,4,3\}$ (iv) $\{3,8,15,4,11,10,9\}$
- (v) $\{3,4,8,15,10,9,16\}$

4. If $A = \{9,10,8\}$ and $B = \{5,2,7\}$, then $A \cap B =$

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

5. If $A = \{7,8,9,2,6\}$ and $B = \{5,7,2,10,3\}$, then $A \cap B =$

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

6. If $A = \{0,14,2,12,11,5,7\}$ and $B = \{8,12,15,13,11,14,1\}$, then $A \cap B =$

- (i) $\{11,14,5,12\}$ (ii) $\{11,18,12,14\}$ (iii) $\{12,11,14\}$ (iv) $\{12,1,11,14\}$ (v) $\{11,14,5,13,12\}$

7. If $A = \{1,-4,5\}$ and $\mu = \{1,-4,5,4,3\}$, find $A \cup A$

- (i) $\{1,8,-4\}$ (ii) $\{1,5\}$ (iii) $\{5,1,-4\}$ (iv) $\{1,9,-4\}$ (v) $\{-1,5,1,0,-4\}$

8. If $A = \{8,-2,9\}$ and $\mu = \{8,-2,9,0,1\}$, find $A \cup \emptyset$

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

9. Which of the following are true?

- a) $A \cup \emptyset = A$
- b) $A \cup A = A$
- c) $A \cap \emptyset = A$
- d) $A \cup \emptyset = \emptyset$
- e) $A \cup A = \emptyset$

- (i) $\{a,b\}$ (ii) $\{e,c,a\}$ (iii) $\{d,b\}$ (iv) $\{d,b,a\}$ (v) $\{c,a\}$

10. For any two non-empty sets A and B, which of the following are true?

- a) $A \cup B = B \cap A$
 - b) $A \cap B = B \cup A$
 - c) $A \cap B = B \cap A$
 - d) $A \cup B = \emptyset$
 - e) $A \cup B = B \cup A$
- (i) $\{b,e,c\}$ (ii) $\{d,a,c\}$ (iii) $\{a,c\}$ (iv) $\{c,e\}$ (v) $\{b,e\}$

11. If $A = \{-9, 7, -2, 2, -3, 9\}$ and $\mu = \{-9, 7, -2, 2, -3, 9, 0, -8, 1, -4\}$, find $A \cup \mu$

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

12. If $A = \{7, -8, -5, -1, 0\}$ and $\mu = \{7, -8, -5, -1, 0, 6, 2, -7\}$, find $A \cap A$

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

13. If $A = \{-6, -5, 2, -2, 8, 7, 9\}$ and $\mu = \{-6, -5, 2, -2, 8, 7, 9, -7, -3, -8, 4\}$, find $A \cap \emptyset$

- (i) $\{5, 3\}$
- (ii) $\{2\}$
- (iii) $\{\}$
- (iv) $\{0\}$

14. If $A = \{-3, 1, -1, 9\}$ and $\mu = \{-3, 1, -1, 9, 8, 7, 4\}$, find $A \cap \mu$

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

15. If $\mu = \{-9, 8, -8, -4, -7, 9, 0, -3, 4, -5, 5, -6, 7, 6, 3\}$, $A = \{-9, 8, -8, -4, -7, 9\}$ and $B = \{-8, 0, -9, -3, 4\}$, find $n(A)$

- (i) 6
- (ii) 3
- (iii) 5
- (iv) 7
- (v) 9

16. If $\mu = \{-6, 8, -3, 5, -9, -7, 3, 2, 1, 4, -5, -2, 7, 0\}$, $A = \{-6, 8, -3, 5, -9, -7\}$ and $B = \{8, 3, 2, 1\}$, find $n(B)$

- (i) 7
- (ii) 5
- (iii) 1
- (iv) 3
- (v) 4

17. If $\mu = \{9, 4, 8, -6, 6, -8, -4, -5, -2, -3, 5, -9, 7\}$, $A = \{9, 4, 8, -6, 6, -8\}$ and $B = \{6, -4, -8\}$, find $n(A \cup B)$

- (i) 4
- (ii) 7
- (iii) 9
- (iv) 8
- (v) 6

18. If $\mu = \{2, -6, 5, -1, 7, -3, 6, -5, -2, 4, 3, -7, -8, 9\}$, $A = \{2, -6, 5, -1, 7, -3, 6\}$ and $B = \{-6, 6, -5\}$, find $n(A \cap B)$

- (i) 1
- (ii) 2
- (iii) 4
- (iv) 3
- (v) (-1)

Assignment Key

1) (v)	2) (ii)	3) (iv)	4) (v)	5) (iv)	6) (iii)
7) (iii)	8) (v)	9) (i)	10) (iv)	11) (i)	12) (iv)
13) (iii)	14) (iv)	15) (i)	16) (v)	17) (ii)	18) (ii)