



1. If $A = \{1,4,3\}$ and $B = \{5,2,3\}$, then $A \cup B =$
(i) $\{8,3,5,1,2\}$ (ii) $\{2,1,4,8,3,5\}$ (iii) $\{4,1,3,5\}$ (iv) $\{5,3,2,4\}$ (v) $\{1,2,4,5,3\}$
2. If $A = \{9,4,1,0\}$ and $B = \{7,4,1,3\}$, then $A \cup B =$
(i) $\{3,7,1,0,4\}$ (ii) $\{4,11,0,3,1,9,7\}$ (iii) $\{3,9,7,1,0\}$ (iv) $\{11,4,3,7,9,0\}$ (v) $\{4,9,3,0,1,7\}$
3. If $A = \{7,11,3,5,0\}$ and $B = \{1,6,2,9,11\}$, then $A \cup B =$
(i) $\{1,2,0,5,7,9,3,11\}$ (ii) $\{0,1,3,2,7,5,6,9\}$ (iii) $\{1,9,7,6,5,0,3,2,11\}$ (iv) $\{9,0,2,6,20,7,3,11,1\}$
(v) $\{6,3,11,5,2,0,1,7,16,9\}$
4. If $A = \{6,10,4\}$ and $B = \{8,4,9\}$, then $A \cap B =$
(i) $\{14,4\}$ (ii) $\{8,4,10\}$ (iii) $\{4,10\}$ (iv) $\{8,4\}$ (v) $\{4\}$
5. If $A = \{6,10,7,9,5\}$ and $B = \{10,7,8,6,5\}$, then $A \cap B =$
(i) $\{5,10,8,6,9,7\}$ (ii) $\{5,7,6,10\}$ (iii) $\{5,10,6,7,9\}$ (iv) $\{7,5,10,13,6\}$ (v) $\{8,10,7,5,6\}$
6. If $A = \{8,10,6,12,14,2,4\}$ and $B = \{12,0,7,1,6,13,3\}$, then $A \cap B =$
(i) $\{3,6,12\}$ (ii) $\{6,12,3,8\}$ (iii) $\{19,6,12\}$ (iv) $\{12,6\}$ (v) $\{14,6,12\}$
7. If $A = \{9,2,8,3,6,-4\}$ and $\mu = \{9,2,8,3,6,-4,-9,7,4,-7\}$, find $A \cup \mu$
(i) $\{9,2,3,11,6,-4\}$ (ii) $\{-1,8,4,2,-4,6,3,9\}$ (iii) $\{8,2,1,3,9,-8\}$ (iv) $\{6,-4,3,2,9\}$ (v) $\{9,-4,8,2,3,6\}$
8. If $A = \{7,6,0,-3,-7,-8\}$ and $\mu = \{7,6,0,-3,-7,-8,-2,-6,-5,1\}$, find $A \cup \emptyset$
(i) $\{-8,7,0,6,-7\}$ (ii) $\{-7,0,6,-8,7,-3\}$ (iii) $\{0,-8,6,-3,11,-7\}$ (iv) $\{-7,-8,6,12,-1,-4\}$ (v) $\{-8,3,0,1,7,-7,-3,6\}$
9. Which of the following are true?
a) $A \cup \emptyset = \emptyset$
b) $A \cup \emptyset = A$
c) $A \cup A = \emptyset$
d) $A \cap \emptyset = A$
e) $A \cup A = A$

(i) $\{c,e\}$ (ii) $\{d,a,b\}$ (iii) $\{a,b\}$ (iv) $\{b,e\}$ (v) $\{c,e,b\}$
10. For any two non-empty sets A and B, which of the following are true?
a) $A \cap B = B \cup A$
b) $A \cup B = B \cup A$
c) $A \cup B = \emptyset$
d) $A \cup B = B \cap A$
e) $A \cap B = B \cap A$

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

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

Assignment Key

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