EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Sets

Grade : SSC Grade X

1. Which of the following is 'subset' symbol?

   (i) $\not\supset$ (ii) $\subset$ (iii) $\notin$ (iv) $\not\subset$ (v) $\cap$

2. Which of the following are overlapping sets?

   (i) $\{15,18,4,5,3,16\}, \{\}$ (ii) $\{15,18,4,5,3,16\}, \{9,6,16,5,10,15\}$ (iii) $\{18,4,3\}, \{9,6,16,5,10,15\}$

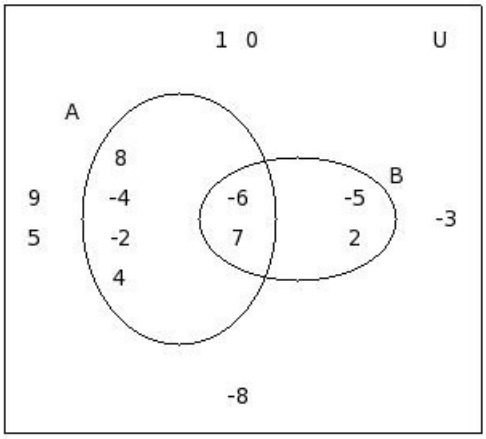
   (iv) $\{15,18,4,5,3,16\}, \{9,6,10\}$ (v) $\{18,4,3\}, \{9,6,10\}$

3. Given 5 sets $A = \{8,3,7,2\}$, $B = \{7,2,8,3\}$, $C = \{3,9,10,2,1,5,6\}$, $D = \{12,14,13,11,18,16,17\}$ and $E = \{1,8,5,4,9,7,6,2,3,10\}$, which of the following are true?

   a) C = D
   b) C ↔ D
   c) A ↔ C
   d) A ⊂ C
   e) A = B

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

4. Find $n((A \cup B) - (A \cap B))$



   (i) 8 (ii) 7 (iii) 6 (iv) 5 (v) 4

5. Given sets A, B and C, where $A \subset B \subset C$, which of the following are true?

   a) $\emptyset \subset B$
   b) $C \supset B$
   c) $B \supset A$
   d) $C \subset A$
   e) $B \subset A$

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

6. Which of the following are true?

a) A ∪ ∅ = A
b) A ∪ A = ∅
c) A ∪ A = A
d) A ∪ ∅ = ∅
e) A ∩ ∅ = A

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

7. Which of the following diagrams represent 'A is subset of B'?

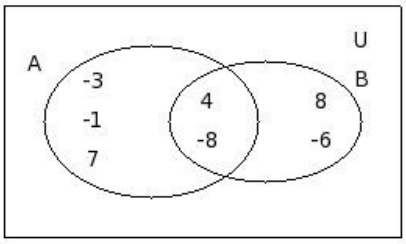


figure 1

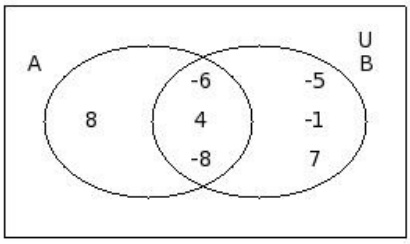


figure 2

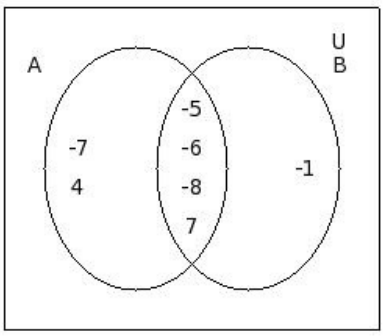


figure 3

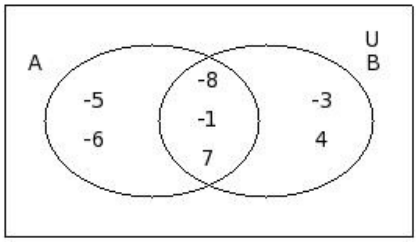
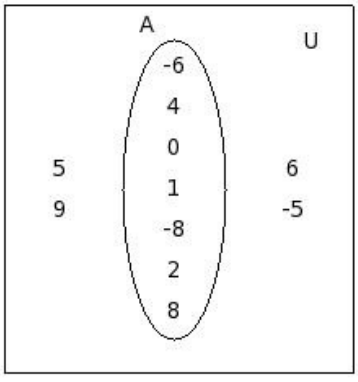


figure 4

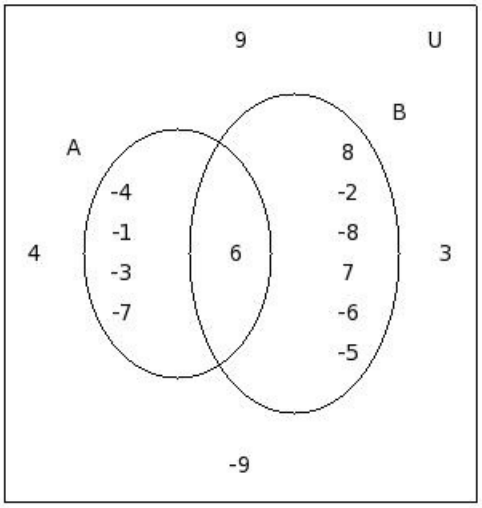
(i) figure 3 (ii) None of the above (iii) figure 1 (iv) figure 2 (v) figure 4

8. Find n(A ∩ μ)



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

9. Find n(B)



(i) 6 (ii) 9 (iii) 5 (iv) 7 (v) 8

10. If A ⊂ B, then which of the following are true?

a) B − A = A
b) A ∪ B = ∅
c) B − A = B
d) A − B = B
e) A − B = ∅

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

11. If A = {8,0,5,9} and B = {4,8,0,9} , then A ∪ B =

(i) {0,5,9,15,8} (ii) {4,0,9,5,8} (iii) {} (iv) {9,0,11,4,5,8} (v) {5,8,4,0}

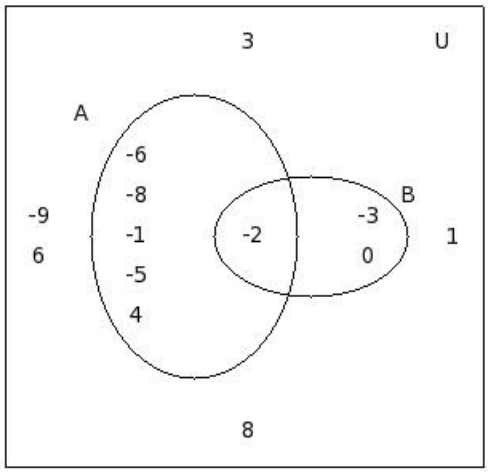
12. If μ = {-7,-5,8,4,7,-8,5,9,-6,-9,-1,0,10,6,2,-3,3,-4}, A = {-7,-5,8,4,7,-8,5} and B = {8,9,5,-6,-7,-8,-9}, find A ∩ B

(i) {5,8,-7,-8} (ii) {-7,5,-8} (iii) {-8,0,5,8} (iv) {-7,8,5} (v) {8,3,-8,-7,5}

13. If μ = {6,3,7,2,0,-5,5,-8,-1,-4,8,-3,9}, A = {6,3,7,2,0} and B = {-5,5,-8,6,3}, find (A ∪ B) − (A ∩ B)

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

14. Find (A ∪ B) − (A ∩ B)



(i) {0,4,-1,-3,-8,-5,6} (ii) {-1,4,-3,0,-5,-6} (iii) {-6,-1,0,-3,-5,4,-8} (iv) {-3,-1,-5,4,-8,-6}

(v) {-3,4,-1,-5,-8,0,-9,-6}

15. Which of the following is a singleton set?

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

16. Which of the following is 'intersection' symbol?

(i) ↔ (ii) ⊂ (iii) ∉ (iv) ⊃ (v) ∩

17. If μ = {3,-7,9,5,-6,4,-3,-8,-1,2,-5,1,6,0}, A = {3,-7,9,5,-6,4,-3} and B = {-8,-1,3}, find (A − B) ∪ (B − A)

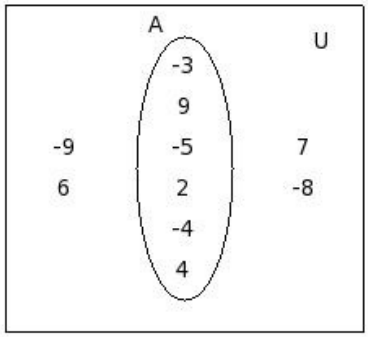
(i) {-3,-6,5,-8,-7,9,4} (ii) {-8,9,2,-1,-7,4,5,-3,-6} (iii) {-1,-7,-8,5,9,-6,4,-3} (iv) {9,2,-3,-8,-6,5,-7,4}

(v) {-8,-7,5,-6,4,-1,-3}

18. Which of the following is not a subset of A = {9,5,2,8,1,4}?

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

19. Find n(A ∪ μ)



(i) 8 (ii) 9 (iii) 10 (iv) 13 (v) 11

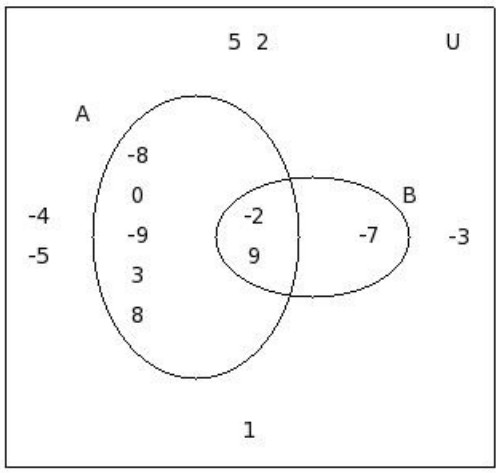
20. If μ = {5,2,-1,9,7,6,-6,0,-9,3,8}, A = {5,2,-1,9} and B = {7,2,6,-6}, find n((A − B) ∪ (B − A))

(i) 8 (ii) 5 (iii) 3 (iv) 7 (v) 6

21. Which of the following is 'superset' symbol?

(i) ⊆ (ii) ∪ (iii) ↔ (iv) ⊃ (v) ⊇

22. Find A



(i) {0,-9,-2,3,-8,8,9} (ii) {-8,1,-2,3,8,9,0,-9} (iii) {0,-8,1,3,8,-2,9} (iv) {8,0,3,9,-9,-8} (v) {3,-8,8,-2,0,9}

23. If A ⊂ B, then which of the following are true?

a) A ∪ B = ∅
b) A ∪ B = B
c) A ∪ B = A
d) A ∩ B = A
e) A ∩ B = B

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

24. If A = {-6,5,0} and μ = {-6,5,0,-2,9}, find A ∪ A

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

25. If μ = {0,-2,1,-4,4,7,9,2,-6,-1,-3,8}, A = {0,-2,1,-4,4} and B = {7,4,0,9}, find A − B

(i) {-2,1,-4} (ii) {8,1,-2,-4} (iii) {1,-2} (iv) {} (v) {-2,-3,-4}

Assignment Key

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