EduSahara™ Learning Center Assignment

Grade : Class VIII, ICSE
Chapter : Sets
Name : Set Concepts
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1. Which of the following elements belong to the set {4,6,10,5,7} ?

   (i) 14 (ii) (-2) (iii) (-3) (iv) 5 (v) 15

---

2. Which of the following is 'union' symbol?

   (i) $\not\supset$ (ii) $\cup$ (iii) $\subset$ (iv) $\in$ (v) $\supseteq$

---

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

   (i) $\cap$ (ii) $\subset$ (iii) $\cup$ (iv) $\notin$ (v) $\supset$

---

4. Which of the following is 'minus' symbol?

   (i) $-$ (ii) $\subseteq$ (iii) $\cup$ (iv) $\supseteq$ (v) $\not\supset$

---

5. Which of the following is 'complement' symbol?

   (i) $\supseteq$ (ii) $\cup$ (iii) $'$ (iv) $\in$ (v) $\subseteq$

---

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

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

---

7. Which of the following is 'subset or equal to' symbol?

   (i) $\leftrightarrow$ (ii) $\subseteq$ (iii) $\in$ (iv) $\not\supset$ (v) $\cap$

---

8. Which of the following is 'not a subset' symbol?

   (i) $\leftrightarrow$ (ii) $\cup$ (iii) $\notin$ (iv) $\supset$ (v) $\subset$

---

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

   (i) $\notin$ (ii) $\supseteq$ (iii) $\cup$ (iv) $\cap$ (v) $\supset$

---

10. Which of the following is 'superset or equal to' symbol?

    (i) $\supseteq$ (ii) $\in$ (iii) $\notin$ (iv) $\cap$ (v) $\subset$

---

11. Which of the following is 'not a superset' symbol?

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

---

12. Which of the following is 'equivalent set' symbol?

(i) $\supset$ (ii) $\cap$ (iii) $\leftrightarrow$ (iv) $\notin$ (v) $\in$

---

13. Which of the following is 'belongs to' symbol?

(i) $\cup$ (ii) $\subset$ (iii) $\not\subset$ (iv) $\in$ (v) $\not\supset$

---

14. Which of the following is 'does not belongs to' symbol?

(i) $\cup$ (ii) $\not\supset$ (iii) $\subseteq$ (iv) $\supset$ (v) $\notin$

---

15. Which of the following is 'universal set' symbol?

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

---

16. Which of the following is 'null set' symbol?

(i) $\varnothing$ (ii) $\subset$ (iii) $\subseteq$ (iv) $\not\supset$ (v) $\not\subset$

---

17. Which of the following elements does not belong to the set {9,1,3,8,6} ?

(i) 9 (ii) 3 (iii) 1 (iv) 7 (v) 6

---

18. Which of the following elements does not belong to the set {m,v,q,p,j}

(i) d (ii) m (iii) v (iv) j (v) p

---

19. Which of the following is not equal to set A = {4,10,0,5,2,7} ?

(i) {10,4,2,5,3,7} (ii) {7,4,10,2,0,5} (iii) {10,0,7,4,2,5}
(iv) {2,10,0,5,7,4} (v) {4,2,0,7,5,10}

---

20. Which of the following is an empty set?

(i) {0} (ii) {empty} (iii) {} (iv) {$\varnothing$} (v) {o}

---

21. Which of the following is a null set?

(i) {$\varnothing$} (ii) $\varnothing$ (iii) {0} (iv) {o} (v) {empty}

---

22. Which of the following are null sets?

a) $\varnothing$
b) {empty}
c) {$\varnothing$}

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d) {}
e) {1,3,7}

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

---

23. Which of the following sets are not equivalent to set {8,4,10} ?

a) {10,2,1}
b) {4}
c) {4,6,7}
d) {9,1,2}
e) {5}

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

---

24. Which of the following are equivalent sets?

a) {6,-2,0,-4,-7,9,-9}
b) {-8,-1,1,8,-7,-9,3,0,-4}
c) {3,7,-8,-6,9,6,2}
d) {7,-3,3,6,-9,-4,0,2}
e) {5,1,4,-9,-7,8}

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

---

25. Which of the following sets have same cardinality?

a) {9,-6,-5,-1,-2,-3,8}
b) {3,-5,5,8,6,-7}
c) {-6,7,9,4,-9}
d) {3,-3,-7,-8,9,-9,1,-6}
e) {2,-4,0,-5,-2,-8}

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

---

26. Which of the following is a subset of set A = {-1,9,7,5,-8} ?

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

---

27. Which of the following is a subset of set A = {0,-2,6,-9,-5} ?

(i) {-5,-9,-7,-2,0} (ii) μ (iii) {6,-2,-5,0,-8,-9} (iv) {∅} (v) ∅

---

28. Which of the following is the power set of A = {3} ?

(i) { {} {3} {4} }

(ii) { {} {3} }

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(iii) { }

(iv) { {} }

(v) {3,4}

---

29. Which of the following is the power set of A = {2,1} ?

(i) { {1} {2,1} }

(ii) {1,2,6}

(iii) { {} {2} {1} {2,1} {6,7} }

(iv) { {} {2} {1} {2,1} }

(v) { {2} {1} {2,1} }

---

30. Which of the following is the power set of A = {1,5,2} ?

(i) { {} {5} {1,5} {1,2} {5,2} {1,5,2} }

(ii) { {} {1} {5} {2} {1,5} {1,2} {5,2} {1,5,2} }

(iii) { {} {1} {5} {1,5} {1,2} {5,2} {1,5,2} }

(iv) { {} {1} {5} {2} {1,5} {1,2} {5,2} {1,5,2} {0} }

(v) {2,1,5,0}

---

31. Find the number of subsets of A = {1,0,5,3,2}

(i) 32 (ii) 33 (iii) 34 (iv) 30 (v) 31

---

32. Which of the following is a proper subset of A = {1,3,4} ?

(i) {1,3,4} (ii) {4,1} (iii) {1,5,3} (iv) {0,3} (v) {2,4}

---

33. Find the number of proper subsets of A = {1,4,5,2,0,3}

(i) 62 (ii) 64 (iii) 61 (iv) 63 (v) 65

---

34. What is the cardinality of an empty set?

(i) 4 (ii) 5 (iii) 2 (iv) 0

---

35. Which of the following is not a subset of A = {4,6,2,0,9,8} ?

(i) {2,4,8,6,5} (ii) {4,6,2,0,9,8} (iii) {0,6,8,9,4}

(iv) {9,0,4,6,2} (v) {2,0,9,8}

---

36. Which of the following is superset of A = {4,2,8} ?

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(i) {4,8,5} (ii) {9,4,2} (iii) {2,4,8,7} (iv) {8} (v) {2,4}

---

37. Which of the following is not a superset of A = {1,7,4,9,2,6} ?

(i) {7,6,2,0,1,9,4} (ii) {4,9,1,7,3,2,6} (iii) {6,4,7,1,2,9}
(iv) {9,8,2,4,6,7} (v) {9,1,8,2,6,4,7}

---

38. Which of the following symbols represent the set of Natural numbers ?

(i) R (ii) Q (iii) W (iv) N (v) Z

---

39. Which of the following symbols represent the set of Whole numbers ?

(i) W (ii) R (iii) Z (iv) Q' (v) N

---

40. Which of the following symbols represent the set of Integers ?

(i) Q (ii) W (iii) Z (iv) Q' (v) N

---

41. Which of the following symbols represent the set of Rational numbers ?

(i) Q' (ii) W (iii) R (iv) Q (v) Z

---

42. Which of the following symbols represent the set of Irrational numbers ?

(i) R (ii) Q' (iii) N (iv) W (v) Q

---

43. Which of the following symbols represent the set of Real numbers ?

(i) W (ii) Z (iii) R (iv) N (v) Q'

---

44. If A = {4,5,10,8,6} , which of the following are true?

a) $8 \subset A$

b) $8 \in A$

c) $\{10,6\} \subset A$

d) $8 \notin A$

e) $A \supset 8$

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

---

45. If A and B are disjoint sets, which of the following are true?

a) $A \cap B = \emptyset$
b) $A \cup B = A$
c) $A \subset B$
d) $B \subset A$

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e) $A \cap B = A$

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

---

46. If A = {u,w,q,j,f} , which of the following are true?

a) $w \notin A$

b) $w \subset A$

c) $\{q,w\} \subset A$

d) $w \in A$

e) $A \supset w$

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

---

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

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

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

---

48. Which of the following are true?

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

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

---

49. If $A \subset B$, then which of the following are true?

a) $A' \subset B$
b) $A' = B$
c) $B \supset A$
d) $A = B$
e) $B \subset A$

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

---

50. If $A \subset B$, then which of the following are true?

a) $A \cap B = B$
b) $A \cup B = A$

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c) $A \cap B = A$
d) $A \cup B = \varnothing$
e) $A \cup B = B$

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

---

51. If $A \subset B$, then which of the following are true?

a) $B - A = A$
b) $A - B = B$
c) $A \cup B = \varnothing$
d) $B - A = B$
e) $A - B = \varnothing$

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

Given 5 sets A = {9,2,4,6} , B = {6,9,4,2} , C = {8,2,9,6,3,10,4} ,

52. D = {17,14,18,12,13,11,16} and E = {8,1,5,3,2,6,10,4,9,7} ,

which of the following are true?

a) $C \leftrightarrow D$
b) $A \subset C$
c) $A \leftrightarrow C$
d) $A = B$
e) $C = D$

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

---

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

a) $A \cap B = B \cap A$
b) $A \cap B = B \cup A$
c) $A \cup B = B \cup A$
d) $A \cup B = B \cap A$
e) $A \cup B = \varnothing$

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

---

54. Which of the following are true?

a) $A \cup A' = \mu$
b) $A \cap A' = \mu$
c) $A \cap A' = \varnothing$
d) $A \cup A' = A$
e) $A \cap A' = A$
f) $A \cup A' = \varnothing$

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

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55. Which of the following are true with respect to set operations?

a) Union distributes over intersection
b) Intersection is associative
c) Intersection distributes over union
d) Union does not distribute over intersection
e) Intersection is not associative

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

---

56. Which of the following are true with respect to set operations?

a) Union is associative
b) Union is commutative
c) Intersection is commutative
d) Union is not commutative
e) Intersection is not commutative

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

---

57. Which of the following are true?

a) A' ∪ B' = (A ∩ B)'
b) A' ∩ B' = (A ∩ B)'
c) A' ∩ B' = A' ∪ B'
d) A' ∪ B' = (A ∪ B)'
e) A' ∩ B' = (A ∪ B)'

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

---

58. Which of the following are true?

a) A ∪ (B ∩ C) = (A ∪ B) ∩ (A ∪ C)
b) A ∩ (B ∪ C) = (A ∪ B) ∩ (A ∪ C)
c) (A ∪ B) ∪ C = A ∪ (B ∪ C)
d) (A ∩ B) ∩ C = A ∩ (B ∩ C)
e) A ∩ (B ∪ C) = (A ∩ B) ∪ (A ∩ C)
f) A ∪ (B ∩ C) = (A ∩ B) ∪ (A ∩ C)

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

---

59. Which of the following are disjoint sets?

(i) {20,3,17,2,12} , {3,5,19,14,9}

(ii) {20,17,2,12} , {5,19,14,9}

(iii) {20,3,17,2,12} , {}

(iv) {20,3,17,2,12} , {20,3,17,2,12}

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(v) {} , {20,3,17,2,12}

---

60. Which of the following are overlapping sets?

(i) {18,14,9,6,2,19,4} , {}

(ii) {18,14,9,6} , {5,7,16}

(iii) {18,14,9,6,2,19,4} , {5,7,19,2,16,4}

(iv) {18,14,9,6} , {5,7,19,2,16,4}

(v) {18,14,9,6,2,19,4} , {5,7,16}

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Assignment Key

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

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40) (iii)
41) (iv)
42) (ii)
43) (iii)
44) (i)
45) (iv)
46) (iv)
47) (iii)
48) (ii)
49) (ii)
50) (i)
51) (i)
52) (iv)
53) (i)
54) (iv)
55) (ii)
56) (iii)
57) (i)
58) (iii)
59) (ii)
60) (iii)

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