



GRADE 11TH MATHS

CHAPTER 1

SETS

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Mathematics Questions– Sets and their Representations – 1

1. Which of the following set is not possible?

- a) Honest persons
- b) Prime numbers up to 100
- c) Even numbers up to 100
- d) Letters forming the word SCHOOL

2. Which of the following is not a set of letters of word PRINCIPAL?

- a) {P,R,I,N,C,A,L}
- b) {C,A,P,I,N,R,L}
- c) {P,R,I,N,C,I,P,A,L}
- d) {L,N,I,P,C,A,R}

3. Write solution set of equation $x^2-3x+2=0$ in roster form.

- a) {1,3}
- b) {2,4}
- c) {1,4}
- d) {1,2}

4. Write the set 12,23,34,45,56 in set builder form.

- a) $\{x: x=n/(n+1) \text{ where } n \text{ is a natural number less than } 6\}$
- b) $\{x: x=n+1/(n+2) \text{ where } n \text{ is a natural number less than } 6\}$
- c) $\{x: x=n+1/n \text{ where } n \text{ is a natural number less than } 6\}$
- d) $\{x: x=n/(n+1) \text{ where } n \text{ is a natural number less than } 5\}$

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5. Write the set $\{x : x \text{ is an integer and } x^2 - 9 = 0\}$ in roster form.

- a) $\{3\}$
- b) $\{-3\}$
- c) $\{3, -3\}$
- d) $\{9, 3\}$

6. Write the set $\{x : x \text{ is a natural number and } x^2 - 9 = 0\}$ in roster form.

- a) $\{3\}$
- b) $\{-3\}$
- c) $\{3, -3\}$
- d) $\{9, 3\}$

7. Let $A = \{1, 2, 3, 4, 5\}$. Insert appropriate symbol in 2 _____ A.

- a) =
- b) <
- c) \in
- d) \notin

8. Let $X = \{1, 2, 3, 4, 5, 6\}$. Insert appropriate symbol in 9 _____ X.

- a) =
- b) <
- c) \in
- d) \notin

9. Which of the following does not belong to set $\{x : x \text{ is a vowel in English alphabet}\}$?

- a) e

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b) b

c) i

d) o

10. The number of elements in set $\{x : x \text{ is a letter of word TRIGONOMETRY}\}$ is _____

a) 8

b) 7

c) 9

d) 10

11. What is the solution set of the equation $X^2+3X+2=0$ in roster form?

a) $\{-1, 2\}$

b) $\{-1, -2\}$

c) $\{1, -2\}$

d) $\{1, 2\}$

12. Which one of the following is the correct representation for the set $\{x : x \text{ is a positive integer and } x^3 < 50\}$ in roster form?

a) $\{0,1,2,3,4,5\}$

b) $\{-1,1,2,3\}$

c) $\{1,2,3\}$

d) $\{0,1,2,3\}$

13. Which one of the following is the correct representation of set $A = \{1,3,5,7,\dots\}$ in set builder form?

a) $\{x : x = 2n \text{ where } n \in \mathbb{N}\}$

b) $\{x : x = n^2 - 1 \text{ where } n \in \mathbb{N}\}$

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c) $\{x: x = 2n+1 \text{ where } n \in \mathbb{N}\}$

d) $\{x: x = 2n-1 \text{ where } n \in \mathbb{N}\}$

14. Which of the following is true for set $A = \{1,2,3,5,7,10\}$?

a) $0 \in A$

b) $2 \in A$

c) $3 \notin A$

d) $5 \notin A$

15. Which one of the following is not a set?

a) The collection of all whole numbers less than 200

b) The collection of all boys in your class

c) The collection of talented actors in Hollywood

d) The collection of all books written by Chetan Bhagat

“Sets and their Representations – 2”.

1. How to define a set?

a) A collection of well-defined objects or element

b) A collection of unordered objects or element

c) Any random elements

d) A collection of special characters

2. How is a set denoted?

a) $()$

b) $\{\}$

c) $[\]$

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d) **

3. How will you define a set of all real numbers?

- a) $\{x: -1 < x < 1\}$
- b) $[x: -\infty < x < \infty]$
- c) $\{x: -\infty < x < \infty\}$
- d) $\{x: -Z < x < +Z\}$

4. How will you define Union of two sets A and B?

- a) $\{x: x \in A \text{ or } x \in B\}$
- b) $\{x: x \in A \text{ or } x \in B \text{ (or both)}\}$
- c) $\{x: x \in A \text{ and } B\}$
- d) $\{x: x \in A - B\}$

5. How will you define the difference of two sets B-A?

- a) $\{x: x \in A \text{ and } x \notin B\}$
- b) $\{x: x \notin A \text{ and } x \in B\}$
- c) $\{x: x \in A \text{ and } x \in B\}$
- d) $\{x: x \notin A \text{ and } x \notin B\}$

6. What will be the set of the interval $[a, b]$?

- a) $\{x: a < x < b\}$
- b) $\{x: a \leq x \leq b\}$
- c) $\{x: a < x \leq b\}$
- d) $\{x: a \leq x < b\}$

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8. How to solve for x , if $|x-1| \geq 3$?

- a) $(-\infty, -2) \cup (4, \infty)$
- b) $(-\infty, -2] \cup [4, \infty)$
- c) $(0, -2] \cup (4, 0)$
- d) $(-\infty, \infty) - \{-2, 4\}$

9. What is the interval of $f(x) = (x-1)(x-2)(x-3)/(x^3 + 6x^2 + 11x + 6)$ where $f(x)$ is positive?

- a) $(-\infty, -3) \cup (3, \infty)$
- b) $(3, -2) \cup (1, 1) \cup (2, 3)$
- c) $(-\infty, -3) \cup (2, -1) \cup (1, 2) \cup (3, \infty)$
- d) $(-\infty, \infty)$

10. What is the interval of $f(x) = (x-1)(x-2)(x-3)/(x^3 + 6x^2 + 11x + 6)$ where $f(x)$ is negative?

- a) $(-\infty, -3) \cup (3, \infty)$
- b) $(3, -2) \cup (1, 1) \cup (2, 3)$
- c) $(-\infty, -3) \cup (2, -1) \cup (1, 2) \cup (3, \infty)$
- d) $(-\infty, \infty)$

11. What is the set of all x for which $1/(x-1)(3-x) \leq 1$?

- a) $(-\infty, 1) \cup (3, \infty)$
- b) $(-\infty, 1) \cup (3, \infty) \cup \{2\}$
- c) $(-\infty, 1) \cup \{2\}$
- d) $(3, \infty) \cup \{2\}$

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12. Which one of the following is the correct representation of set $A = \{2, 4, 8, 16, \dots\}$ in set builder form?

- a) $\{x: x = 2n \text{ where } n \in \mathbb{N}\}$
- b) $\{x: x = 2n \text{ where } n \in \mathbb{N}\}$
- c) $\{x: x = 4n \text{ where } n \in \mathbb{N}\}$
- d) $\{x: x = 2n+4 \text{ where } n \in \mathbb{N}\}$

13. A set can be a collection but a collection cannot be a set.

- a) True
- b) False

“The Empty Set”.

1. Find the odd one out.

- a) Null set
- b) Void set
- c) Infinite set
- d) Empty set

2. Which of the following is representation of empty set?

- a) $()$
- b) $[]$
- c) $\{\}$
- d) $< >$

3. Which of the following is an empty set?

- a) Prime numbers up to 10

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- b) Even numbers up to 10
- c) Prime numbers divisible by 2
- d) Prime numbers divisible by 3
4. Find the number of points common to parallel lines.
- a) Three points
- b) One point
- c) Two point
- d) No point
5. Is set $\{x : x \text{ is a natural number } x < 5 \text{ and } x > 7\}$ a null set?
- a) True
- b) False
6. Which of the following is a null set?
- a) $\{x : x \text{ is a natural number and } x^2 = 4\}$
- b) $\{x : x \text{ is a rational number and } x^2 = 2\}$
- c) $\{x : x \text{ is an even prime number}\}$
- d) $\{x : x \text{ is name of the day of week}\}$
7. The number of elements in a null set is _____
- a) zero
- b) one
- c) two
- d) any

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8. Find the solution to set $\{x : x \text{ is a natural number and } 2x+1=2\}$.

- a) $\{1\}$
- b) $\{2\}$
- c) $\{1/2\}$
- d) $\{\}$

9. A set with no elements in it is called?

- a) Equivalent Set
- b) Empty Set
- c) Equal Set
- d) Infinite Set

10. Which of the following is an empty set?

- a) The set of dogs with six legs
- b) The set of books in the library
- c) The set of boys in a school
- d) The set of a square with 4 sides

11. If B is a null set and A is some set then which one of the following is false?

- a) $B \subseteq A$
- b) $B \cup A = A$
- c) $B \cap A = A$
- d) $B \cap A = B$

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12. The subset of a null set is the null set itself.

a) True

b) False

“Finite and Infinite Sets”.

1. Which of the following set is finite?

a) {1,2,3,4,.....}

b) {4,7,9}

c) {1,4,9,16,.....}

d) {1,8,27,.....}

2. The finite set can have _____ number of elements.

a) only zero

b) only one

c) at least one

d) zero or more but not infinite

3. The set is infinite if it has _____ number of elements.

a) zero

b) one

c) finite

d) infinite

4. Which of the following is infinite set?

a) Set of days of week

b) Set of points on a line

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- c) Set of months in a year
- d) Set of prime numbers less than 99
5. Set of letters of English alphabet is _____
- a) empty set
- b) singleton set
- c) finite set
- d) infinite set
6. Which of the following is a finite set?
- a) Set of natural numbers
- b) Set of whole numbers
- c) Set of even numbers
- d) Set of even prime number
7. Which of the set is singleton set?
- a) Set of odd prime numbers
- b) Set of even prime numbers
- c) Set of odd numbers
- d) Set of prime numbers
8. Set $\{x : x \text{ is a natural number and } 2x+1=0\}$ is a finite set?
- a) True
- b) False
9. Set of solutions of a quadratic equation is finite set.
- a) True
- b) False

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10. Finite set _____ empty set.

- a) is same as
- b) is an
- c) is not
- d) may or may not

11. Which of the following is an infinite set?

- a) A set of girls in a college
- b) A set of players in a cricket team
- c) A set of points in a Line
- d) A set of edges in a square

12. Which of the following is true?

- a) A finite set has an infinite number of elements
- b) An empty set is a finite set
- c) An empty set is neither finite nor infinite
- d) An infinite set has a countable number of elements

13. Which of the following is a finite set?

- a) Set of points in a line
- b) Set of natural numbers
- c) Set of mothers in a family
- d) Set of prime numbers

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“Subsets – 1”.

1. If every element of set X is in set Y then _____
 - a) $X \subset Y$
 - b) $Y \subset X$
 - c) $X = Y$
 - d) $X \neq Y$
2. If set A is equal to set B then _____
 - a) $A \subset B$
 - b) $B \subset A$
 - c) $A \subset B$ and $B \subset A$
 - d) neither $A \subset B$ nor $B \subset A$
3. Let $X = \{1,2,3\}$, $Y = \{ \}$, $Z = \{1,2,3\}$, then which of the following is true?
 - a) $X \subset Y$
 - b) Only $Y \subset X$ and $Y \subset Z$
 - c) $Z \subset Y$
 - d) $Y \subset X$ and $Y \subset Z$ and $X \subset Z$
4. Let $A = \{2,3,5\}$ and $B = \{3,5,7\}$. Which of the following is true?
 - a) $A \subset B$
 - b) $B \subset A$
 - c) $A = B$
 - d) $A \subset A$

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5. Let X be set of rational numbers. Which of the following is superset of X ?

- a) Set of real numbers
- b) Set of natural numbers
- c) Set of whole numbers
- d) Set of integers

6. Let X be set of rational numbers. Which of the following is not subset of X ?

- a) Set of real numbers
- b) Set of natural numbers
- c) Set of whole numbers
- d) Set of integers

7. Let $A = \{1, 3\}$, $B = \{1, 5, 9\}$, $C = \{1, 3, 5, 7, 9\}$. Then _____

- a) $A \subset B$
- b) $B \subset A$
- c) $C \subset B$ and $A \subset C$
- d) $B \subset C$ and $A \subset C$

8. If an element $x \in A$ and $A \subset B$ then $x \in B$.

- a) True
- b) False

9. If $X \in A$ and $A \subset B$ then $X \subset B$.

- a) True
- b) False

10. Let $A = \{1, 2, \{3, 4\}, 5\}$. Which of the following is true?

- a) $\{3, 4\} \subset A$

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- b) $\{3, 4\} \in A$
- c) $\{\{3, 4\}\} \subset A$
- d) $\{1, 2, 5\} \subset A$

“Subsets – 2”.

1. If $A = \{1, 2, 3, 4, 6\}$ and $B = \{2, 3, 4\}$ then which one of the following is correct?

- a) A is a universal set
- b) B is a subset of A
- c) B is a superset of A
- d) A is a null set

2. The total number of subsets of a finite set containing n elements is?

- a) $2n+1$
- b) $2n$
- c) $2n$
- d) N

3. If $A = \{1, 2\}$ and $B = \{1, 2, 4, 8, 10\}$ then?

- a) $A=B$
- b) $A \subseteq B$
- c) $B \subseteq A$
- d) $A \not\subseteq B$

4. If $A = \{1, 3\}$ and $B = \{1, 2, 5\}$ then?

- a) $A \subseteq B$
- b) $B \subseteq A$

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c) $\Phi \subseteq A$

d) $B \subseteq \Phi$

5. If $A = \{2,4\}$ then subsets of A are _____

a) $\{\{2\}, \{4\}\}$

b) $\{\{2\}, \{4\}, \{2,4\}\}$

c) $\{\Phi, \{2\}, \{4\}\}$

d) $\{\Phi, \{2\}, \{4\}, \{2,4\}\}$

6. The number of subsets of a set containing 5 elements is?

a) 5

b) 25

c) 32

d) 64

7. If A is a set of whole numbers and B is a set of Natural Numbers then choose the correct option.

a) $A \subseteq B$

b) $B \subseteq A$

c) $A=B$

d) A and B are finite sets

8. If $A \subseteq B$ then what is $A \cap B$, where A and B are two sets?

a) A

b) B

c) Null set

d) Universal Set

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9. If $A \subseteq B$ then what is $A \cup B$, where A and B are two sets?

- a) A
- b) B
- c) Null Set
- d) Universal Set

10. If $A \subseteq B$ and $B \subseteq A$ then $A=B$.

- a) True
- b) False

“Power Sets”.

1. Which of the following is not the element of power set of $\{2,3\}$?

- a) Φ
- b) $\{2\}$
- c) $\{\{2,3\}\}$
- d) $\{2,3\}$

2. If a set A has 3 elements then find the number of elements in power set of set A.

- a) 1
- b) 2
- c) 8
- d) 27

3. If set $A = \{1,2,3\}$ then which of the following is incorrect?

- a) $\Phi \in A$
- b) $\Phi \in P(A)$

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c) $\Phi \subset A$

d) $\Phi \subset P(A)$

4. If set $X = \{2,3,5,7\}$, then $n[P(X)]$ is _____

a) 8

b) 16

c) 32

d) 64

5. How many elements are there in $P(A)$, if $A = \phi$?

a) 1

b) 2

c) 3

d) 4

6. If $A = \{a, b, c\}$ then $P(A) = \{\{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{a, c\}, \{a, b, c\}\}$.

a) True

b) False

7. If $X = \{1,2\}$ then $P(X) = \{\phi, \{1\}, \{2\}, \{1,2\}\}$.

a) True

b) False

8. Cardinality of the power set of $\{0, 1, 2, \dots, 6\}$ is _____

a) 1024

b) 4096

c) 512

d) 2048

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9. If a set $A = \{x: x \text{ is a prime number less than } 4\}$ then $n[P(P(A))]$ is _____

- a) 8
- b) 16
- c) 32
- d) 64

10. If set $A = \{\Phi\}$ then $P(A)$ is _____

- a) $\{\Phi\}$
- b) $\{\{\Phi\}\}$
- c) $\{\Phi, \{\Phi\}\}$
- d) Φ

“Universal Set”.

1. A set which is superset of all basic sets of that type?

- a) Power set
- b) Universal set
- c) Empty set
- d) Singleton set

2. Which of the following is universal set for integers?

- a) Natural numbers
- b) Whole numbers
- c) Rational numbers
- d) Prime numbers

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3. Let $A=\{1,2\}$, $B=\{2,4\}$, $C=\{4,5,6\}$. Which of the following may be considered as the universal set for set A, B, C?

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

4. Which of the following is a universal set for the equilateral triangle?

- a) Set of isosceles triangles
- b) Set of right triangles
- c) Set of acute triangles
- d) Set of obtuse triangles

5. Which of the following is considered as universal set for squares?

- a) Set of Rhombus
- b) Set of Parallelogram
- c) Set of Rectangle
- d) Set of Trapezium

6. Which of the following is universal set for $\{a, p\}$?

- a) Set of vowels
- b) Set of consonants
- c) Set of letters of English alphabet
- d) Set of numbers

7. Which of the following is considered as universal set for set of multiple of 4?

- a) Set of multiple of 16

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b) Set of multiple of 12

c) Set of multiple of 2

d) Set of multiple of 8

8. $U = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$. Which of the following is not a subset of the universal set?

a) $\{1, 2\}$

b) $\{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

c) $\{2, 3, 5, 7\}$

d) $\{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

9. The set $\{a, b, e, i, o, u, v, z\}$ is a universal set for a set of vowels.

a) True

b) False

10. The set of prime numbers is a universal set for odd numbers.

a) True

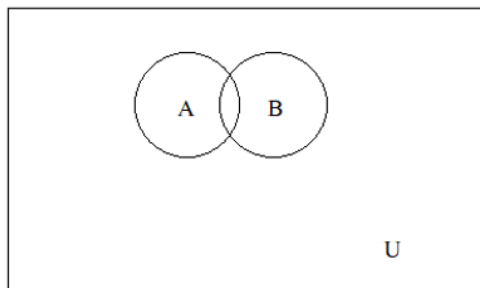
b) False

Venn Diagrams".

1. In the given Venn diagram, is set A subset of set B?

a) True

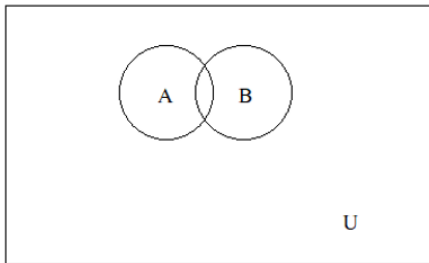
b) False



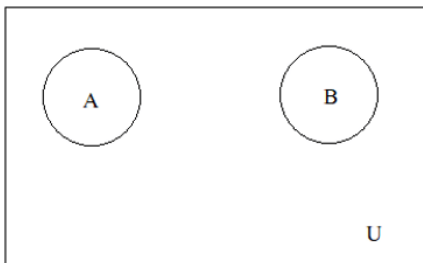
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2. In the given Venn diagram, is set A subset of set U?

- a) True
- b) False

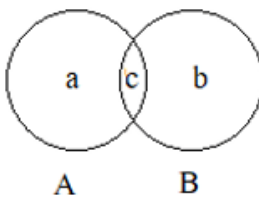


3. Which of the following statement is correct?



- a) A is subset of B
- b) B is subset of A
- c) U is subset of A and B
- d) A and B are subsets of U

4. If $n(A)=10$, $n(B)=20$, $c=5$ in the given Venn diagram. Find a and b.



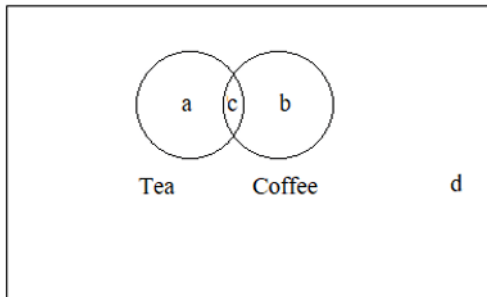
- a) $a=10$ and $b=15$
- b) $a=5$ and $b=15$

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c) $a=15$ and $b=10$

d) $a=15$ and $b=5$

5. In a population of 100 persons, 40 persons like tea and 30 persons like coffee. 10 persons like both of them. How many persons like only tea?



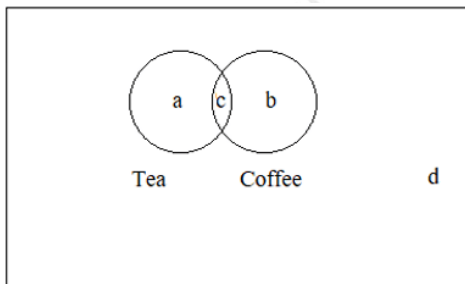
a) 10

b) 20

c) 30

d) 40

6. In a population of 100 persons, 40 persons like tea and 30 persons like coffee. 10 persons like both of them. How many persons like only coffee?



a) 10

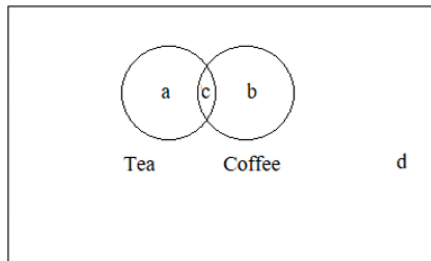
b) 20

c) 30

d) 40

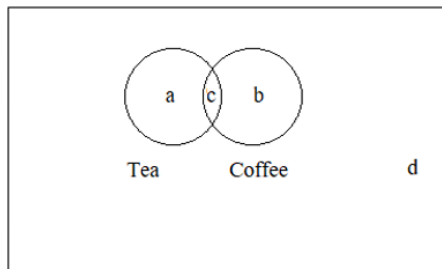
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7. In a population of 100 persons, 40 persons like tea and 30 persons like coffee. 10 persons like both of them. How many persons like either tea or coffee?



- a) 20
- b) 40
- c) 50
- d) 60

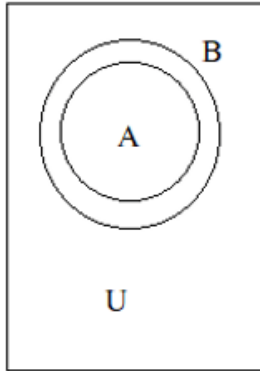
8. In a population of 100 persons, 40 persons like tea and 30 persons like coffee. 10 persons like both of them. How many persons like neither tea nor coffee?



- a) 20
- b) 40
- c) 50
- d) 60

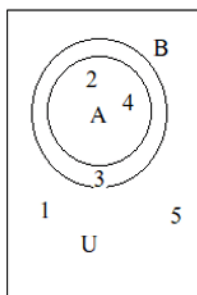
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9. Which of the following is correct?



- a) A is subset of B
- b) B is subset of A
- c) U is subset of A and B
- d) U is subset of A

10. Which of the following is set A?



- a) {1,2,3,4,5}
- b) {2,4}
- c) {2,3,4}
- d) {3}

11. Which of the following is set B?

- a) {1,2,3,4,5}

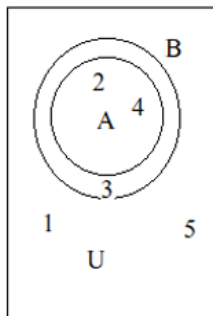
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b) {2,4}

c) {2,3,4}

d) {3}

12. Which of the following is set representing A but not B?



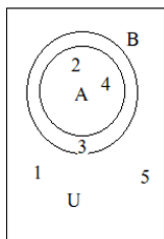
a) {1,2,3,4,5}

b) {2,4}

c) {2,3,4}

d) { }

13. Which of the following is set representing B but not A?



a) { }

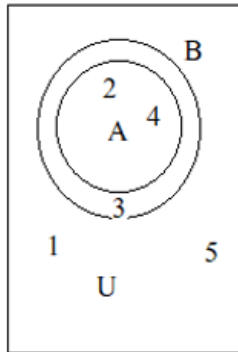
b) {2,4}

c) {2,3,4}

d) {3}

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14. Which of the following is set representing neither A nor B?



- a) {1,5}
- b) {2,4}
- c) {2,3,4}
- d) { }

“Operation on Sets-1”.

1. If $A = \{1,2,3\}$ and $B = \{3,4,5,6\}$. Find $A \cup B$.

- a) {1,2,3}
- b) {3}
- c) {1,2,3,4,5,6}
- d) { }

2. Let A be the set of odd numbers and B be the set of even numbers then find $A \cap B$.

- a) Set of prime numbers
- b) Set of real numbers
- c) Empty set
- d) Set of natural numbers

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3. If $A = \{a, e, i, o, u\}$ and $B = \{a, e, u\}$ then $A \cup B =$ _____

- a) A
- b) B
- c) Φ
- d) $A \cap B$

4. If $A = \{a, e, i, o, u\}$ and $B = \{a, e, u\}$ then $A \cap B =$ _____

- a) A
- b) B
- c) Φ
- d) $A \cup B$

5. If $A = \{1, 2, 3\}$ and $B = \{3, 4, 5, 6\}$. Find $A \cap B$.

- a) $\{1, 2, 3\}$
- b) $\{\}$
- c) $\{1, 2, 3, 4, 5, 6\}$
- d) $\{3\}$

6. Is $A \cup B = B \cup A$?

- a) True
- b) False

7. Is $A \cap B = B \cap A$?

- a) True
- b) False

8. In the given Venn diagram, find $A \cup B$.

- a) a

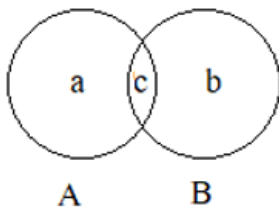
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b) b

c) $a + c$

d) $a + b + c$

9. In the given Venn diagram, find $A \cap B$.



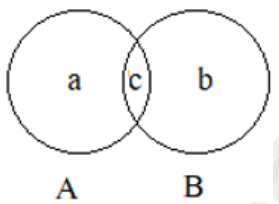
a) a

b) b

c) c

d) $a + b + c$

10. In the given Venn diagram, find $A \cup B$.



a) {1,2,3}

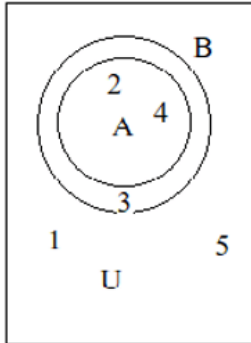
b) {2,4}

c) {3}

d) {2,3,4}

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11. In the given Venn diagram, find $A \cap B$.



- a) $\{1,2,3\}$
- b) $\{2,4\}$
- c) $\{3\}$
- d) $\{2,3,4\}$

“Operation on Sets-2”.

1. If set $A = \{1,2,3,4\}$ and $B = \{3,4,5,6\}$. Find $A - B$.

- a) $\{1,2,3,4,5,6\}$
- b) $\{3,4\}$
- c) $\{1,2\}$
- d) $\{5,6\}$

2. If set $A = \{1,2,3,4\}$ and $B = \{3,4,5,6\}$. Find $B - A$.

- a) $\{1,2,3,4,5,6\}$
- b) $\{3,4\}$
- c) $\{1,2\}$
- d) $\{5,6\}$

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3. Does $A-B=B-A$ always correct?

- a) True
- b) False

4. If $A-B=B-A$ then A and B are _____

- a) equivalent sets
- b) equal sets
- c) disjoint sets
- d) empty sets

5. $A - B$, $A \cap B$ and $B - A$ are mutually disjoint sets or not.

- a) True
- b) False

6. If R is the set of real numbers and S is the set of rational numbers, then what is $R - S$?

- a) Set of integers
- b) Set of whole numbers
- c) Set of irrational numbers
- d) Set of complex numbers

7. $A=\{1,2,3\}$, $B=\{2,3,4\}$, $C=\{2,3,5\}$, $D=\{1,3,5,7\}$. Find $(A \cup B) \cap (C \cup D)$.

- a) A
- b) B
- c) C
- d) D

8. $A=\{1,2,3\}$, $B=\{2,3,4\}$, $C=\{2,3,5\}$, $D=\{1,3,5,7\}$. Find $(A \cap B) \cup (C \cap D)$.

- a) A

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b) B

c) C

d) D

9. If A is set of natural numbers, B is set of odd natural numbers and C is set of even natural numbers, then find A-B.

a) A

b) B

c) C

d) B-C

10. If A is set of natural numbers, B is set of odd natural numbers and C is set of even natural numbers, then find $B \cup C$.

a) A

b) B

c) C

d) B-C

11. If A is set of natural numbers, B is set of odd natural numbers and C is set of even natural numbers, then find $B \cap C$.

a) A

b) B

c) C

d) Φ

12. $(A \cup B) \cap (B \cup A) =$ _____

a) A

b) B

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c) $A \cup B$

d) $A \cap B$

13. $(A \cap B) \cup (B \cap A) =$ _____

a) A

b) B

c) $A \cup B$

d) $A \cap B$

“Complement of a Set”.

1. What does A' denotes when U is a universal set?

a) A

b) Φ

c) U

d) $U - A$

2. If $A = \{2, 3, 5\}$ and U be the set of prime factors of 210 then find A' .

a) $\{2, 3, 5\}$

b) $\{2, 3, 5, 7\}$

c) $\{7\}$

d) Φ

3. Is $(A')' = A$?

a) True

b) False

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4. Let $U = \{1, 2, 3, 4, 5, 6\}$, $A = \{1,4\}$ and $B = \{2,3,5\}$. Find A' .

- a) $\{2,3,5,6\}$
- b) $\{1,2,3\}$
- c) $\{1,4,6\}$
- d) $\{1,2,3,4,5,6\}$

5. Let $U = \{1, 2, 3, 4, 5, 6\}$, $A = \{1,4\}$ and $B = \{2,3,5\}$. Find B' .

- a) $\{2,3,5,6\}$
- b) $\{1,2,3\}$
- c) $\{1,4,6\}$
- d) $\{1,2,3,4,5,6\}$

6. Let $U = \{1, 2, 3, 4, 5, 6\}$, $A = \{1,4\}$ and $B = \{2,3,5\}$. Find $A' \cap B'$.

- a) $\{2,3,5,6\}$
- b) $\{1,2,3\}$
- c) $\{6\}$
- d) $\{1,2,3,4,5,6\}$

7. Let $U = \{1, 2, 3, 4, 5, 6\}$, $A = \{1,4\}$ and $B = \{2,3,5\}$. Then $A' \cap B'$ is equal to $(A \cup B)'$.

- a) True
- b) False

8. Which of the following is equal to $A \cup A'$?

- a) U
- b) A
- c) A'
- d) U'

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9. If A is set of equilateral triangles then A' is _____

- a) set of isosceles triangles
- b) set of scalene triangles
- c) union of sets of scalene and isosceles triangles
- d) intersection of sets of scalene and isosceles triangles

10. Which of the following is not equal to set A?

- a) $A \cap U$
- b) $A \cap \Phi'$
- c) $A \cup A'$
- d) $A \cup \Phi$

“Practical Problems on Union and Intersection of Two Sets”.

1. Which of the following is correct?

- a) $n(A \cup B) = n(A) + n(B) + n(A \cap B)$
- b) $n(A \cup B) = n(A) - n(B) - n(A \cap B)$
- c) $n(A \cup B) = n(A) + n(B) - n(A \cap B)$
- d) $n(A \cap B) = n(A) + n(B) + n(A \cup B)$

2. What is $A \cup B$ for two mutually exclusive sets A and B?

- a) $n(A) + n(B)$
- b) $n(A) - n(B)$
- c) $n(B) - n(A)$
- d) $n(A) * n(B)$

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3. If set A has 10 elements, set B has 20 elements, 5 elements are common to both then find the number of elements in $X \cup Y$.

- a) 10
- b) 15
- c) 20
- d) 25

4. In a family of 10 members, 7 of them like tea or coffee, 4 of them like tea and 5 of them like coffee. How many of them like both tea and coffee?

- a) 1
- b) 2
- c) 7
- d) 9

5. In a family of 10 members, 7 of them like tea or coffee, 4 of them like tea and 5 of them like coffee. How many of them like neither tea nor coffee?

- a) 1
- b) 2
- c) 3
- d) 4

6. In a family of 10 members, 7 of them like tea or coffee, 4 of them like tea and 5 of them like coffee. How many of them like only tea?

- a) 2
- b) 3
- c) 4
- d) 5

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7. In a family of 10 members, 7 of them like tea or coffee, 4 of them like tea and 5 of them like coffee.
How many of them like only coffee?

- a) 2
- b) 3
- c) 4
- d) 5

8. In a city of 1000 population, all people read newspaper. 600 people read Hindustan Times and 700 people read Times of India. How many people read both newspaper?

- a) 100
- b) 300
- c) 1000
- d) 1300

9. In a city of 1000 population, all people read newspaper. 600 people read Hindustan Times and 700 people read Times of India. How many people read only Hindustan Times?

- a) 100
- b) 200
- c) 300
- d) 600

10. In a city of 1000 population, all people read newspaper. 600 people read Hindustan Times and 700 people read Times of India. How many people read only Times of India?

- a) 200
- b) 400
- c) 600
- d) 700

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11. In a committee, if 50 people speak French, 20 people speak Spanish, 10 people speak both the languages, then how many people speak at least one of the two languages?
- a) 10
 - b) 20
 - c) 50
 - d) 60
12. A group conducted a survey of 100 consumers and reported that 72 consumers like apples and 45 consumers like oranges, what is the least number that must have liked both products?
- a) 14
 - b) 15
 - c) 16
 - d) 17
13. In a population of 1000 people, 700 people play football, 600 people play cricket, and 100 people play both. Is the data correct?
- a) True
 - b) False
14. In a group of students, 100 students know Hindi, 50 know English and 25 know both. Each of the students knows either Hindi or English. How many students are there in the group?
- a) 75
 - b) 100
 - c) 125
 - d) 175
15. If 200 people like tea, 300 people like coffee and 250 people like both. Is the data correct?
- a) True
 - b) False