

his set of Mathematics Multiple Choice Questions & Answers (MCQs) focuses on "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) $\{ \}$

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Answer: c

Explanation: Union of set A and B is a set that contains all the elements of set A and set B.

$$A = \{1,2,3\}$$

$$B = \{3,4,5,6\}$$

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

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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Answer: c

Explanation: Intersection of set A and B is a set that contains elements which is common to both set A and set B. Set of odd numbers and even numbers does not have any common element so, $A \cap B$ is an empty set.

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

- a) A
- b) B
- c) Φ
- d) $A \cap B$

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Answer: a

Explanation: Union of set A and B is a set that contains all the elements of set A and set B.

$$A = \{a, e, i, o, u\}$$

$$B = \{a, e, u\}$$

$$A \cup B = \{a, e, i, o, u\} = A.$$

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

- a) A

b) B

c) Φ

d) $A \cup B$

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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) $\{3\}$

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

a) True

b) False

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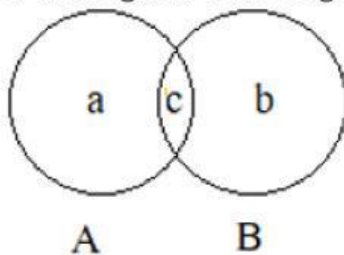
7. Is $A \cap B = B \cap A$?

a) True

b) False

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



a) a

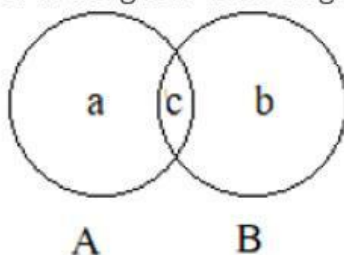
b) b

c) $a + c$

d) $a + b + c$

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



a) a

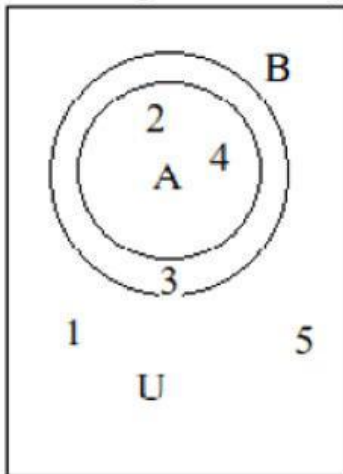
b) b

c) c

d) $a + b + c$

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



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

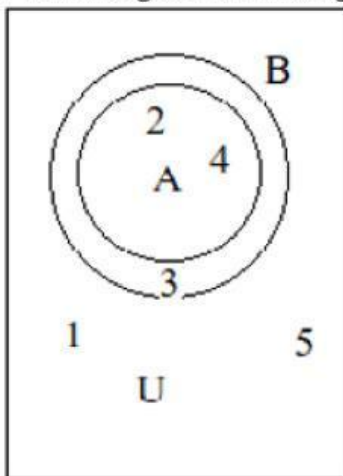
b) $\{2,4\}$

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) $\{2,3,4\}$

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Answer: b

Explanation: Intersection of two sets A and B is the region common to both set A and set B.

In the given Venn diagram, $A \cap B = \{2,4\}$