



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



CLASS 8

SUBJECT – Arithmetic Work sheet 1 answer key

Marks:15

SETSDate:20.2.2021

Answer all the following questions(1×15=15)

1. Which of the following is subset of set $\{1, 2, 3, 4\}$.
- a) $\{1, 2\}$
 - b) $\{1, 2, 3\}$
 - c) $\{1\}$
 - d) All of the mentioned

Answer: d

Explanation: There are total 16 subsets.

2. $A = \{\emptyset, \{\emptyset\}, 2, \{2, \emptyset\}, 3\}$, which of the following is true.

- a) $\{\{\emptyset, \{\emptyset\}\} \in A$
- b) $\{2\} \in A$
- c) $\emptyset \subset A$
- d) $3 \subset A$

Answer: c

Explanation: Empty set is a subset of every set

3. Subset of the set $A = \{ \}$ is:

- a) A
- b) $\{ \}$
- c) \emptyset
- d) All of the mentioned

Answer: d

Explanation: Every set is subset of itself and Empty set is subset of each set.

4. What is the cardinality of the set of odd positive integers less than 10?

- a) 10
- b) 5
- c) 3
- d) 20

Answer: b

Explanation: Set S of odd positive an odd integer less than 10 is $\{1, 3, 5, 7, 9\}$. Then, Cardinality of set $S = |S|$ which is 5.

5. The union of the sets $\{1, 2, 5\}$ and $\{1, 2, 6\}$ is the set _____

- a) $\{1, 2, 6, 1\}$
- b) $\{1, 2, 5, 6\}$

c) {1, 2, 1, 2}

d) {1, 5, 6, 3}

Answer: b

Explanation: The union of the sets A and B, is the set that contains those elements that are either in A or in B.

6. The intersection of the sets {1, 2, 5} and {1, 2, 6} is the set _____

a) {1, 2}

b) {5, 6}

c) {2, 5}

d) {1, 6}

Answer: a

Explanation: The intersection of the sets A and B, is the set containing those elements that are in both A and B.

7. . Two sets are called disjoint if there _____ is the empty set.

a) Union

b) Difference

c) Intersection

d) Complement

Answer: c

Explanation: By the definition of the disjoint set

8. Which of the following two sets are disjoint?

a) {1, 3, 5} and {1, 3, 6}

b) {1, 2, 3} and {1, 2, 3}

c) {1, 3, 5} and {2, 3, 4}

d) {1, 3, 5} and {2, 4, 6}

Answer: d

Explanation: Two sets are disjoint if the intersection of two sets is the empty set.

9. The difference of {1, 2, 3} and {1, 2, 5} is the set _____

a) {1}

b) {5}

c) {3}

d) {2}

Answer: c

Explanation: The difference of the sets A and B denoted by A-B, is the set containing those elements that are in A not in B.

10. The complement of the set A is _____

a) A – B

b) U – A

c) A – U

d) B – A

Answer: b

Explanation: The complement of the set A is the complement of A with respect to U.

11. The set difference of the set A with null set is _____

- a) A
- b) null
- c) U
- d) B

Answer: a

Explanation: The set difference of the set A by null set denoted by $A - \{\text{null}\}$ is A.

12. Let the set A is {1, 2, 3} and B is {2, 3, 4}. Then number of elements in $A \cup B$ is

- a) 4
- b) 5
- c) 6
- d) 7

Answer: a

Explanation: $A \cup B$ is {1, 2, 3, 4}.

13. Let the set A is {1, 2, 3} and B is {2, 3, 4}. Then number of elements in $A \cap B$ is

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

Answer: b

Explanation: $A \cap B$ is {2, 3}.

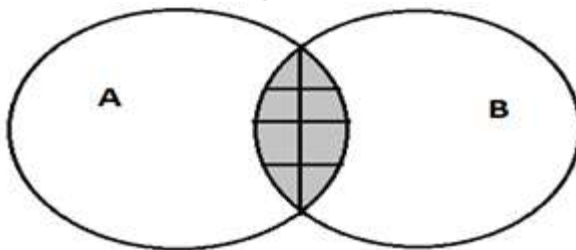
14. Let A be set of all prime numbers, B be the set of all even prime numbers, C be the set of all odd prime numbers, then which of the following is true?

- a) $A \equiv B \cup C$
- b) B is a singleton set.
- c) $A \equiv C \cup \{2\}$
- d) All of the mentioned

Answer: d

Explanation: 2 is the only even prime number.

15. The shaded area of figure is best described by



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

Answer: a

Explanation: The region is A intersection B.

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