



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



SUBJECT – Arithmetic
Marks:15

CLASS 8
Work sheet 1
SETS

Date:7.4.2020

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

- A set is denoted by
 - { }
 - ()
 - []
 - none of these
- The set O of odd positive integers less than 10 can be expressed by _____
 - {1, 2, 3}
 - {1, 3, 5, 7, 9}
 - {1, 2, 5, 9}
 - {1, 5, 7, 9, 11}
- Which of the following two sets are equal?
 - A = {1, 2} and B = {1}
 - A = {1, 2} and B = {1, 2, 3}
 - A = {1, 2, 3} and B = {2, 1, 3}
 - A = {1, 2, 4} and B = {1, 2, 3}
- The set of positive integers is _____
 - Infinite
 - Finite
 - Subset
 - Empty
- The members of the set $S = \{x \mid x \text{ is the square of an integer and } x < 100\}$ is _____
 - {0, 2, 4, 5, 9, 58, 49, 56, 99, 12}
 - {0, 1, 4, 9, 16, 25, 36, 49, 64, 81}
 - {1, 4, 9, 16, 25, 36, 64, 81, 85, 99}
 - {0, 1, 4, 9, 16, 25, 36, 49, 64, 121}

6. The sets $\{M, A, N\}$ and $\{B, O, Y\}$ are types of
- equal sets
 - equivalent sets
 - empty sets
 - singleton sets
7. The set $\{0, 1, 2, 3, 4, \dots\}$ is an example of
- set of natural numbers
 - set of real numbers
 - set of integers
 - set of whole numbers
8. The set of rational numbers is denoted by
- Q
 - R
 - Z
 - N
9. Which of the following statement is correct?
- All equal sets are equivalent
 - All equivalent sets are equal
 - An empty set is not a null set
 - $\{0\}$ is an empty set
10. $\{x: x \text{ is a real number between } 1 \text{ and } 2\}$ is an
- Infinite set
 - Finite set
 - Empty set
 - None of the mentioned
11. Convert set $\{x: x \text{ is a positive prime number which divides } 72\}$ in roster form:
- $\{2, 3, 5\}$
 - $\{2, 3, 6\}$
 - $\{2, 3\}$
 - $\{\emptyset\}$
12. Express $\{x: x = n / (n+1), n \text{ is a natural number less than } 7\}$ in roster form:
- $\{\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}\}$

- b) $\{\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{5}{6}, \frac{6}{7}, \frac{7}{8}\}$
- c) $\{\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{5}{6}, \frac{6}{7}\}$
- d) Infinite set

13. Which sets are not empty?

- a) $\{x: x \text{ is a even prime greater than } 3\}$
- b) $\{x : x \text{ is a multiple of } 2 \text{ and is odd}\}$
- c) $\{x: x \text{ is an even number and } x+3 \text{ is even}\}$
- d) $\{x: x \text{ is a prime number less than } 5 \text{ and is odd}\}$

14. Write set $\{1, 5, 15, 25, \dots\}$ in set-builder form :

- a) $\{x: \text{either } x=1 \text{ or } x=5n, \text{ where } n \text{ is a real number}\}$
- b) $\{x: \text{either } x=1 \text{ or } x=5n, \text{ where } n \text{ is a integer}\}$
- c) $\{x: \text{either } x=1 \text{ or } x=5n, \text{ where } n \text{ is an odd natural number}\}$
- d) $\{x: x=5n, \text{ where } n \text{ is a natural number}\}$

15. $\{x: x \text{ is an integer neither positive nor negative}\}$ is

- a) Empty set
- b) Non- empty set
- c) Finite set
- d) Both b and c