



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



**Sub: Arithmetic**

**Class: 7**

**Date: 08.05.21**

**Duration: 40 min**

**Worksheet Solutions 26**

**Full Marks: 15**

## SETS

### Choose the Correct options:

- Which one of the following sets is infinite?
  - The set of whole numbers less than 10
  - The set of prime numbers less than 10
  - The set of integers less than 10**
  - The set of factors of 10
- A is the set of factors of 18. Which of the following is not a member of A?
  - 2
  - 3
  - 5**
  - 9
- If  $A = \{1, 3, 5, 7, 9\}$  and  $B = \{2, 3, 5, 7\}$ , what is  $A \cup B$ ?
  - $\{3, 5, 7\}$
  - $\{2, 3, 5, 7\}$
  - $\{2, 3, 5, 7, 9\}$
  - $\{1, 2, 3, 5, 7, 9\}$**
- If  $A = \{1, 3, 5, 7, 9\}$  and  $B = \{2, 3, 5, 7\}$ , what is  $A \cap B$ ?
  - $\{3, 5, 7\}$**
  - $\{2, 3, 5, 7\}$
  - $\{2, 3, 5, 7, 9\}$
  - $\{1, 2, 3, 5, 7, 9\}$
- If  $X = \{a, e, i, o, u\}$  and  $Y = \{a, b, c, d, e\}$ , then what is  $Y - X$ ?
  - $\{a, e\}$
  - $\{i, o, u\}$
  - $\{b, c, d\}$**
  - $\{b, c, d, i, o, u\}$
- If  $A = \{1, 3, 5, 6, 7, 9\}$  and  $B = \{2, 3, 5, 7, 9\}$ , what is  $A \cup B$ ?
  - $\{3, 5, 7, 9\}$
  - $\{2, 3, 5, 6, 7\}$
  - $\{2, 3, 5, 6, 7, 9\}$
  - $\{1, 2, 3, 5, 6, 7, 9\}$**
- If  $A = \{1, 3, 5, 6, 7, 9\}$  and  $B = \{2, 3, 5, 7, 9\}$ , what is  $A \cap B$ ?
  - $\{3, 5, 7, 9\}$**
  - $\{2, 3, 5, 6, 7\}$
  - $\{2, 3, 5, 6, 7, 9\}$
  - $\{1, 2, 3, 5, 6, 7, 9\}$
- The Universal Set =  $\{-4, 3, -2, -1, 0, 1, 2, 3, 4\}$  and  $A = \{0\}$ . What is the complement of A?
  - $\{-4, -3, -2, -1, 0, 1, 2, 3\}$
  - $\{-3, -2, -1, 1, 2, 3\}$
  - $\{-4, -3, -2, -1, 1, 2, 3, 4\}$**
  - $\{-4, -3, -2, -1, 1, 2, 3\}$

9. If  $P = \{0, 1, 2, 3, 4\}$ ,  $Q = \{4, 6, 8\}$   $R = \{6, 12, 18\}$  Then what is  $(P \cap Q) \cup (Q \cap R)$ ?
- {4}
  - {4, 6}**
  - {4, 6, 8}
  - {1, 2, 3, 4, 6, 8}
10. If  $P = \{0, 1, 2, 3, 4\}$ ,  $Q = \{4, 5, 6, 7\}$   $R = \{3, 6, 9\}$ , and  $S = \{6, 12, 18\}$   
Then what is  $(P \cup Q) \cap (S \cup R)$ ?
- {6}
  - {3, 6}**
  - {4, 6}
  - {1, 2, 3, 4, 5, 6, 7, 9, 12, 18}
11. If  $A = \{1, 3, 5, 15\}$ ,  $B = \{2, 3, 5, 7\}$   $C = \{2, 4, 6, 8\}$  then what is  $(A \cup B) \cap C$  ?
- {1,3,5}
  - {1,2,3}
  - {2,3,5}
  - {2}**
12. If  $U$  (the universal set) =  $\{1, 3, 5, 7, 9, 11, 13, 15, 17\}$  and  $W = \{5, 7, 9, 11\}$ , then  $W' = \dots$
- {1, 3, 13, 15, 17}**
  - {1, 3}
  - {2, 4, 6, 8, 10, 12, 14, 16}
  - {1, 3, 5, 7, 9, 11, 13, 15, 17}
13.  $P = \{a, b, c, d, e, f, g, h, i, j, k, l, m\}$
- Roster Form**
  - Universal Form
  - Set Builder Notation
  - Equivalent Inequalities
14. What type of set is denoted as either  $\{ \}$  or  $\emptyset$ ?
- Superset
  - Empty (or Null) Set**
  - Disjointed Set
  - Subset
15. If set  $A$  equals the people in your class and set  $B$  equals the people in your class who wear glasses. What is meant by  $A \cap B$ ?
- All the people in your class.
  - The people in your class who wear glasses.**
  - The people in your class who do not wear glasses.
  - Some of the people in your class who wear glasses