



GRADE 7

STUDENTS' WORKSHEETS
MATHEMATICS
(September)

Academic Year
2020 - 2021



COVID-19
ACCELERATED
RESPONSE FOR
EDUCATION, PUNJAB



Punjab Curriculum & Textbook Board, Lahore

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STUDENTS' WORKSHEETS MATHEMATICS (September)



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WORKSHEET # 1

Lesson Plan # 1

Instructions: Read the following questions/statements carefully and provide answer in the given space.

Q 1. Encircle the correct answer.

i. Union of two sets A and B is denoted by:

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

ii. If set $A = \{1, 3, 5\}$ and set $B = \{0, 1, 2, 3\}$, then $A \cup B$ will be:

- (a) $\{1, 3, 5\}$ (b) $\{0, 1, 3, 5\}$ (c) $\{0, 1, 2, 3, 5\}$ (d) $\{0, 1, 2, 3, 3, 5\}$

iii. If set $C = \{ \}$ and set $D = \{2, 4, 6\}$, then $C \cup D$ will be:

- (a) $\{2, 4, 6\}$ (b) $\{ \}$ (c) $\{0\}$ (d) $\{\{ \}, 2, 4, 6\}$

Q 2. Find union of the following sets:

i. $S = \{a, b, c\}$, $T = \{c, d, e\}$

Ans: _____

ii. $S = \{a, b, c\}$, $T = \{c, d, e\}$

Ans: _____

iii. $X = \{2, 4, 6, 8, 10\}$, $Y = \{1, 5, 10\}$

Ans: _____

iv. $X = \{\text{red, orange}\}$, $Y = \{\text{yellow, red}\}$

Ans: _____

Q 3. If N is a set of Natural numbers and W is a set of Whole numbers, then find $N \cup W$.

Ans: _____

WORKSHEET # 2

Lesson Plan # 2

Instructions: Read the following questions/statements carefully and provide answer in the given space.

Q1. Encircle the correct answer.

- i. Intersection of two sets A and B is denoted by:
 (a) $A \cap B$ (b) $A \cup B$ (c) A/B (d) $A \setminus B$
- ii. If set $A = \{1, 3, 5\}$ and set $B = \{0, 1, 2, 3\}$, then $A \cap B$ will be:
 (a) $\{1, 3, 5\}$ (b) $\{1, 3\}$ (c) $\{0, 1, 2, 3, 5\}$ (d) $\{0, 1, 2, 3, 3, 5\}$
- iii. If set $C = \{\}$ and set $D = \{2, 4, 6\}$, then $C \cap D$ will be:
 (a) $\{2, 4, 6\}$ (b) $\{\}$ (c) $\{0\}$ (d) $\{\{, 2, 4, 6\}$

Q2. Find intersection of the following sets:

- i. $C = \{a, b\}$, $D = \{b, c, e\}$

Ans: _____

- ii. $M = \{1, 2, 3, \dots, 10\}$, $N = \{5, 10, 15, 20\}$

Ans: _____

- iii. $U = \{-1, -2, -3\}$, $Y = \{1, 2, 3\}$

Ans: _____

- iv. $X = \{\text{red, yellow, green}\}$, $Y = \{\text{blue, green, orange, red}\}$

Ans: _____

Q3. If N is a set of Natural numbers and W is a set of Whole numbers, then find $N \cap W$.

Ans: _____

WORKSHEET # 3

Lesson Plan # 3

Instructions: Read the following questions/statements carefully and provide answer in the given space.

Q 1. Encircle the correct answer.

i. If set $A = \{1, 3, 5\}$ and set $B = \{0, 1, 2, 3\}$, then $A \setminus B$ will be:

- (a) $\{1, 3, 5\}$ (b) $\{0, 1, 3, 5\}$ (c) $\{0, 1, 2, 3, 5\}$ (d) $\{5\}$

ii. If set $C = \{\}$ and set $D = \{2, 4, 6\}$, then $C \setminus D$ will be:

- (a) $\{2, 4, 6\}$ (b) $\{\}$ (c) $\{0\}$ (d) $\{\{\}, 2, 4, 6\}$

Q 2. If $R = \{0, 1, 2, 3\}$, $S = \{0, 2, 4\}$ and $T = \{1, 2, 3, 4\}$, then find

i. $R \setminus S$

Ans: _____

ii. $R \setminus T$

Ans: _____

iii. $T \setminus S$

Ans: _____

iv. $R \setminus T$

Ans: _____

WORKSHEET # 4

Lesson Plan # 4

Instructions: Read the following questions/statements carefully and provide answer in the given space.

Q 1. Identify whether the following pairs of sets are disjoint or overlapping. Encircle the correct answer.

i. $A = \{a, b, c, d, e\}$, $B = \{d, e, f, g, h\}$ Disjoint / Overlapping

ii. $L = \{2, 4, 6, 8, 10\}$, $M = \{3, 6, 9, 12\}$ Disjoint / Overlapping

iii. $E = \text{Set of even numbers}$, $F = \text{Set of odd numbers}$ Disjoint / Overlapping

Q 2. If $U = \{1, 2, 3, \dots, 10\}$, $A = \{1, 2, 3, 4, 5\}$, $B = \{1, 3, 4, 5, 7, 9\}$ and $C = \{2, 4, 6, 8\}$, then find

i. A'

Ans: _____

ii. B'

Ans: _____

iii. C'

Ans: _____

Q 3. If $U = \{1, 2, 3, \dots, 20\}$, $A = \{1, 3, 5, \dots, 19\}$ and $B = \{2, 4, 6, \dots, 20\}$, then prove that:

i. $A' = B$

Ans: _____

ii. $B' = A$

Ans: _____

WORKSHEET # 5

Lesson Plan # 5

Instructions: Read the following questions/statements carefully and provide answer in the given space.

Q 1. If $A = \{a, e, i, o, u\}$, $B = \{a, b, c\}$ and $C = \{a, c, e, g\}$, then verify:

i. $A \cap B = B \cap A$

Ans: _____

ii. $A \cup C = C \cup B$

Ans: _____

iii. $B \cap C = C \cap B$

Ans: _____

iv. $A \cup B = B \cup A$

Ans: _____

Q 2. If $O = \{1, 3, 5, 7, \dots\}$, $E = \{2, 4, 6, 8, \dots\}$ and $N = \{1, 2, 3, 4, \dots\}$, then verify:

i. $O \cup (E \cap N) = O \cup (E \cap N)$

Ans: _____

ii. $O \cap (E \cap N) = O \cap (E \cap N)$

Ans: _____

Q 3. Match the columns with the correct answer:

Column A	Column B
$A \cup (B \cup C)$	$A \cup B$
$A \cap B$	$B \cap A$
$A \cap (B \cap C)$	$(A \cup B) \cup C$
$B \cup A$	$(A \cap B) \cap C$

WORKSHEET # 6

Lesson Plan # 6

Instructions: Read the following questions/statements carefully and provide answer in the given space.

Q1. If $A = \{a, e, i, o, u\}$, $B = \{a, b, c, d, e\}$ and $C = \{d, e, i, m, n\}$, then match the columns with their correct answer:

$A - B$	$\{b, c, d\}$
$B - A$	$\{i, m, n\}$
$B - C$	$\{a, o, u\}$
$C - B$	$\{i, o, u\}$
$A - C$	$\{d, m, n\}$
$C - A$	$\{a, b, c\}$

Q2. If $A = \{1, 7, 9, 11\}$, $B = \{1, 5, 9, 13\}$ and $C = \{2, 6, 9, 11\}$, then verify:

i. $A - B \neq B - A$

Proof: _____

ii. $A - C \neq C - A$

Proof: _____

