



GRADE 8

STUDENTS' WORKSHEETS
MATHEMATICS
(September)

Academic Year
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COVID-19
ACCELERATED
RESPONSE FOR
EDUCATION, PUNJAB



Punjab Curriculum & Textbook Board, Lahore

GRADE 8

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. Write all subsets of the set A, where $A = \{e, g\}$

Ans: _____

Q 2. Write all proper subsets of the set B, where $B = \{1, 2, 3\}$

Ans: _____

Q 3. Write all power sets of the given sets:

i. $B = \{p, q, r, s\}$

Ans: _____

ii. $Z = \{\text{apples, oranges, bananas}\}$

Ans: _____

Q 4. Encircle the correct answer.

(i) If 'a' is not a member of the set A, then symbolically it is written as:

- (a) $a \in A$ (b) $a \setminus A$ (c) $a \notin A$ (d) $a \cap A$

(ii) The number of proper subsets of the set $\{1, 2, 3\}$ is:

- (a) 3 (b) 7 (c) 8 (d) 4

(iii) The number of subsets of the set $\{0\}$ is:

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

(iv) A set consisting of all subsets of the set X is called:

- (a) subset (b) universal set (c) power set (d) super set

WORKSHEET # 2

Lesson Plan # 2

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

Q1. If $A = \{1, 2, 3, \dots, 15\}$, $B = \{6, 8, 10, \dots, 20\}$, then verify

i. $A \cup B = B \cup A$

Ans: _____

ii. $A \cap B = B \cap A$

Ans: _____

Q1. If $X = \{1, 2, 3, \dots, 14\}$, $Y = \{6, 8, 10, \dots, 20\}$ and $Z = \{1, 3, 5, 7\}$, then verify

i. $X \cup (Y \cap Z) = (X \cup Y) \cap Z$

Ans: _____

ii. $X \cap (Y \cup Z) = (X \cap Y) \cup Z$

Ans: _____

WORKSHEET # 3

Lesson Plan # 3

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

Q 1. 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 verify distributive law for union over intersection

Ans: _____

Q 2. If $U = \{a, b, c, d, e, \dots, z\}$, $A = \{a, e, i, o, u\}$, $B = \{b, k, l, n, p, s, u\}$ and $C = \{j, k, l, p, s, y, z\}$, then verify distributive law for union over intersection

Ans: _____

WORKSHEET # 4

Lesson Plan # 4

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

Q 1. If $U = \{1, 2, 3, \dots, 20\}$, $A = \{1, 3, 5, \dots, 19\}$ $B = \{2, 4, 6, \dots, 20\}$ and $C = \{2, 4, 6, 8\}$, then verify distributive law for intersection over union.

Ans: _____

Q 2. Match the columns to show symbolic forms of the stated laws.

Column A	Column A
Commutative law of union of sets	$A \cup (B \cap C) = (A \cup B) \cap C$
Commutative law of intersection of sets	$A \cap B = B \cap A$
Associative law of union of sets	$A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$
Associative law of intersection of sets	$A \cap (B \cap C) = (A \cap B) \cap C$
Distributive law of intersection over union of sets	$A \cup B = B \cup A$
Distributive law of union over intersection of sets	$A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

WORKSHEET # 5

Lesson Plan # 5

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

Q1. Write the names of the given sets.

$Q = \{X/X = p/q \text{ where } p \wedge q \notin z, q \neq 0\}$	
$Q' = \{X/X \neq p/q \text{ where } p \wedge q \in z, q \neq 0\}$	
$R = Q \cup Q'$	

Q2. Consider the fractions given in the following set.

$$\left\{ \frac{3}{7}, \frac{4}{7}, \frac{2}{8}, \frac{2}{7}, \frac{8}{5}, \frac{1}{2} \right\}$$

Separate rational, irrational and real numbers and write them in their respective columns as given below:

Rational Numbers	Rational Numbers

Q3. What is the difference between rational and irrational numbers?

Ans: _____

Q4. What is the union of rational and irrational numbers called?

Ans: _____

WORKSHEET # 6

Lesson Plan # 6

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

Q 1. Correct the followings into decimals and separate terminating and non-terminating decimals from the following:

$$\left\{ \frac{4}{5}, \frac{1}{7}, \frac{25}{8}, \frac{13}{4}, \frac{29}{2}, \frac{10}{3} \right\}$$

Terminating decimals	Non-Terminating decimals

Q 2. Separate repeating and non-repeating decimals from the same set of fractions given in Q1.

Repeating decimals	Non-repeating decimals

Q 3. Define a non-terminating, non-repeating decimal fraction. Also give examples.

Ans: _____

Q 4. Encircle the correct answer.

- i. All terminating decimal fraction are:
 - (a) rational
 - (b) irrational
 - (c) non-terminating
- ii. All non-terminating and repeating decimals fractions are:
 - (a) rational
 - (b) irrational
 - (c) terminating
- iii. All non-terminating and non-repeating decimals fractions are:
 - (a) rational
 - (b) irrational
 - (c) terminating
- iv. Fraction $\frac{5}{7}$ is
 - (a) non-terminating, repeating
 - (b) terminating and non-repeating
 - (c) non-terminating and non-repeating

