

LIVE WORK SHEET - 1

STD : X

TEST-1

SUBJECT : MATHS

CHAPTER – 1 [RELATIONS AND FUNCTIONS]

NAME:

I Choose the Correct answer:

DATE:

- If $n(A \times B) = 6$ and $A = \{1, 3\}$ then $n(B)$ is
(A) 1 (B) 2 (C) 3 (D) 6
- $A = \{a, b, p\}$, $B = \{2, 3\}$, $C = \{p, q, r, s\}$ then $n[(A \cup C) \times B]$ is
(A) 8 (B) 20 (C) 12 (D) 16
- If $A = \{1, 2\}$, $B = \{1, 2, 3, 4\}$, $C = \{5, 6\}$ and $D = \{5, 6, 7, 8\}$ then state which of the following statement is true.
(A) $(A \times C) - (B \times D)$ (B) $(B \times D) - (A \times C)$ (C) $(A \times B) - (A \times D)$ (D) $(D \times A) - (B \times A)$
- If there are 1024 relations from a set $A = \{1, 2, 3, 4, 5\}$ to a set B , then the number of elements in B is
(A) 3 (B) 2 (C) 4 (D) 8
- The range of the relation $R = \{(x, x^2) / x \text{ is a prime number less than } 13\}$ is
(A) $\{2, 3, 5, 7\}$ (B) $\{2, 3, 5, 7, 11\}$
(C) $\{4, 9, 25, 49, 121\}$ (D) $\{1, 4, 9, 25, 49, 121\}$
- If the ordered pairs $(a+2, 4)$ and $(5, 2a+b)$ are equal then (a, b) is
(A) $(2, -2)$ (B) $(5, 1)$ (C) $(2, 3)$ (D) $(3, -2)$
- Let $n(A) = m$ and $n(B) = n$ then the total number of non-empty relations that can be defined from A to B is
(A) m^n (B) n^m (C) $2^{mn} - 1$ (D) 2^{mn}
- $f: R \rightarrow R$ defined by $f(x) = x^2 + 2$ then the pre-images of 27 are
(A) 5, -5 (B) $\sqrt{5}, -\sqrt{5}$ (C) 5, 0 (D) 0, 5
- If $A = \{a, b, c\}$, $B = \{2, 3\}$ and $C = \{a, b, c, d\}$ then $n[(A \cap C) \times B]$ is
(A) 4 (B) 8 (C) 6 (D) 12
- If the ordered pairs $(a, -1)$ and $(5, b)$ belong to $\{(x, y) / y = 2x + 3\}$, then the values of a and b are
(A) -13, 2 (B) 2, 13 (C) 2, -13 (D) -2, 13

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