



O f f i c i a l T e l e g r a m C h a n n e l

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Math

Unit -1 Grade 11

1. If $A = \{1, 2, 3, 4, 5\}$ and R is a relation from A to A such that $R = \{(x, y) : y = x^2\}$ Then what is the range of R ?
 - A. $\{1, 2\}$
 - B. $\{1, 4\}$
 - C. $\{2, 1\}$
 - D. $\{3, 5\}$

2. If point $P(3, -2)$ satisfies the relation R^{-1} . Which of the following could be R ?
 - A. $R = \{(x, y) : 2x - y = 8\}$
 - B. $R = \{(x, y) : 2x - y = -7\}$
 - C. $R = \{(x, y) : x + 3y = -3\}$
 - D. $R = \{(x, y) : 2x + 2y = 2\}$

3. Which one of the following relation is a function ?
 - A. $R = \{f : A \rightarrow B \text{ where } A = \{1, 3, 5\} \text{ \& } B = \{2, 4\}\}$
 - B. $R = \{(x, y) \text{ where } x \text{ \& } y \text{ are an element of rational no } | y = x^2\}$
 - C. $R = \{(a, b), (a, c), (b, c)\}$
 - D. Abebe is the father of Tolossa , Chaltu and kebede

4. Which one of the following is an odd function ?
 - A: $f : R \rightarrow f(x) = |x| - x$
 - B. $f : R \rightarrow f(x) = -x^3 + x^2$
 - C. $f : R \rightarrow f(x) = x^3 + 2x$
 - D. $f : R \rightarrow f(x) = |x|(x^2)$

5. Which one of the following power function satisfy the condition $f(xy) = f(x) \times f(y)$
 - A. $x^2 + 4x$
 - B. x^4
 - C. $3x^3 + \sqrt{x}$
 - D. $7x^{\frac{3}{4}}$

6. Which of the following modules function correctly evaluated?
 - A. $|1 - \pi| = \pi - 1$
 - B. $|x - 1| = x + 1$
 - C. $|x - y| = x - y, x < y$
 - D. $|3 - \sqrt{6}| = \sqrt{6} - 3$

7. Which of the following is incorrect ?

A. $f = \{ (1,a) , (2,a) , (3,b) \} : A \rightarrow B$ Where $A = \{1,2,3\}$ and $B = \{a,b\}$, is one to one correspondence function.

B. $f: \mathbb{R} \rightarrow (-\infty, \infty)$ given by $f(x) = -x^3$ is one to one function.

C. $f: \mathbb{R} \rightarrow (-\infty, \infty)$ given by $f(x) = \operatorname{sgn}(x^2)$ is on to function.

D. $f: \mathbb{R} \rightarrow (-\infty, \infty)$ given by $f(x) = x^2$ is one to one correspondence function

8. Find $f(x)$, if $g(x) = x-1$ and $f \circ g(x) = 4x^2 - 4x + 1$

A. $f(x) = x^2 + 4x$ B. $f(x) = x^2 - 1$ C. $f(x) = x^2$ D. $f(x) = x^3 + 4x$