

Mathematics

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(Chapter 2)(Inverse Trigonometric Functions)

(Class XII)

(Exemplar Problems)

Objective Type Questions

Choose the correct answers from the given four options in the following (MCQ):

Question 24:

The domain of the function $\cos^{-1}(2x - 1)$ is

(A) $[0, 1]$

(B) $[-1, 1]$

(C) $(-1, 1)$

(D) $[0, \pi]$

Answer 24:

(A) $[0, 1]$

Solution:

Given that: $\cos^{-1}(2x - 1)$

Now, we have $\cos^{-1}(2x - 1)$

$$\Rightarrow -1 \leq 2x - 1 \leq 1$$

$$\Rightarrow 0 \leq 2x \leq 2$$

$$\Rightarrow 0 \leq x \leq 1$$

$$\Rightarrow x \in [0, 1]$$



$$[\because x \in [-1, 1]]$$

Hence, the option (A) is correct.

