

Mathematics

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(Chapter 2)(Inverse Trigonometric Functions)

(Class XII)

(Exemplar Problems)

Objective Type Questions

Fill in the blank in the following:

Question 44:

The value of $\cos(\sin^{-1}x + \cos^{-1}x)$, $|x| \leq 1$ is _____.

Answer 44:

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

Now, we have

$$\cos(\sin^{-1}x + \cos^{-1}x)$$

$$= \cos\left(\frac{\pi}{2}\right)$$

$$\left[\because \sin^{-1}x + \cos^{-1}x = \frac{\pi}{2} \right]$$

$$= 0$$



So, the value of $\cos(\sin^{-1}x + \cos^{-1}x)$ is 0.

