

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 41:

The set of values of $\sec^{-1}\left(\frac{1}{2}\right)$ is _____.

Answer 41:

Given that: $\sec^{-1}\left(\frac{1}{2}\right)$

Now, we have

$$\sec^{-1}\left(\frac{1}{2}\right)$$

According to principle value of $\sec^{-1}x$, the domain of $\sec^{-1}x$ is $R - (-1, 1)$.

$$\Rightarrow (-\infty, -1] \cup [1, \infty)$$

So, there is no set of values exist for $\sec^{-1}\left(\frac{1}{2}\right)$

Hence, the set of values is null set ϕ .

