

Mathematics

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(Chapter 2)(Inverse Trigonometric Functions)

(Class XII)

(Exemplar Problems)

Objective Type Questions

State **True** or **False** for the following statement:

Question 54:

The minimum value of n for which $\tan^{-1} \frac{n}{\pi} > \frac{\pi}{4}$, $n \in N$, is valid is 5.

Answer 54:

False

Given that $\tan^{-1} \frac{n}{\pi} > \frac{\pi}{4}$

$$\Rightarrow \frac{n}{\pi} > \tan\left(\frac{\pi}{4}\right)$$

$$\Rightarrow \frac{n}{\pi} > 1$$

$$\Rightarrow n > \pi$$

$$\Rightarrow n = 4$$



[$\because n \in N$ and $\pi = 3.14$]

