MTH101A: 2021 - 2022

Quiz -II : Question 2

Time: 6:15 - 6:30 pm

Q 2. (a) Is the improper integral $\int_{\pi}^{\infty} \sin^2 x \ dx$ convergent? Justify your answer. [2]

(b) Determine all values of $p \in \mathbb{R}$ for which the improper integral $\int_{\pi}^{\infty} \frac{\sin^2 x}{x^p} dx$ is convergent. [5]