

JEE MAIN VECTOR ALGEBRA — COMPONENTS OF A VECTOR, DIRECTION COSINES — PYQS

Max. Marks: 4

Questions: 1

Section B (Numerical) — 1 question

Q.1 Let $\vec{a}_k = (\tan \theta_k) \hat{i} + \hat{j}$ and $\vec{b}_k = \hat{i} - (\cot \theta_k) \hat{j}$, where

$\theta_k = \frac{2^{k-1}\pi}{2^n+1}$, for some $n \in \mathbb{N}$, $n > 5$. Then the value

of $\frac{\sum_{k=1}^n |\vec{a}_k|^2}{\sum_{k=1}^n |\vec{b}_k|^2}$ is

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Scan or tap for the full solution



ANSWER KEY

[illegible]