

APOLLO

Vector Valued Function

FBISE Mathematics Class 12 (HSSC-II)

Domain B: Geometry

3 questions | questions

Original FBISE question crops. National Curriculum 2022-23 topic.

xiv.	If $\vec{r}(t) = \ln(t-2)\hat{i} + \sqrt{4-t}\hat{j} + e^t\hat{k}$, then domain of $\vec{r}(t)$ is:	$t > 2$	$2 < t \leq 4$	$t \geq 2$	$t \in \mathcal{R}$
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(vi)	Evaluate $\lim_{t \rightarrow 1} [f(t) \times g(t)]$ with $f(t) = (t^2 - 1)\hat{i} + \sqrt{t}\hat{j} + 5\hat{k}$ and $g(t) = (\sin \pi t)\hat{i} + e^{t-1}\hat{j} + 3t\hat{k}$	04
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If $\vec{F}(t) = e^t \tan(t)\hat{i} - \sqrt{\pi} \sec(t)\hat{j} + 2t\hat{k}$, then (a) Evaluate $\vec{F}(0)$, $\vec{F}\left(\frac{\pi}{2}\right)$ and $\vec{F}\left(\frac{2\pi}{3}\right)$ (b) State domain of the function $\vec{F}$.	4
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