

111 Math Test

Q: Determine whether the integral converges or diverges:-

(i) $\int_0^{\infty} x e^{-x^2} dx$

(ii) $\int_{\frac{1}{e}}^e \frac{1}{x(\ln x)^2} dx$

(iii) $\int_{-2}^0 \frac{1}{\sqrt{4-x^2}} dx$

Q₂: Find the integral $\int \tan^3 x \sec^4 x dx$