

King Fahd University for Petroleum and Minerals

Calculus 2

Quiz6

Dr. M. Jarrar

Name:-

ID:-

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Q1) Evaluate the indefinite integral as power series $\int \tan^{-1} x^2 dx$

Q2) Find a power series representation for the function and determine the radius of convergence.

a) $f(x) = \ln(5 - x)$

b) $f(x) = x \cos\left(\frac{1}{2}x^2\right)$

Q3) Find the sum of the series $1 - \ln 2 + \frac{(\ln 2)^2}{2!} - \frac{(\ln 2)^3}{3!} + \dots$