Worksheet: Continuity and Differentiability

IB · Class 12 · Mathematics · 3 questions · 11 marks

Name: _____	Date: _____	Score: _____ / 11

Q1. Find the value of k that makes f(x) = {kx + 1 if x ≤ π, cos x if x > π} continuous at x = π. *[3 marks]*

Q2. Differentiate y = x^(sin x) with respect to x. *[4 marks]*

Q3. Verify the Mean Value Theorem for f(x) = x(x1)(x2) on [0, 1/2]. *[4 marks]*