

Serial No.: _____ Student Name: _____ Student Number: _____
Instructor: M. Z. Abu-Sbeih Math 102- Q5 Date: 12-1-2011

Problem 1: Find the sum of the series

$$3 + \frac{9}{2!} + \frac{27}{3!} + \frac{81}{4!} + \dots$$

Problem 2: Evaluate the indefinite integral as an infinite series: (Write the answer in summation notation)

$$\int \frac{\cos x - 1}{x} dx$$

Problem 3: Find the Taylor series of $f(x) = x^{-2}$ at $a = 1$. (Write the answer in summation notation)
