

King Fahd University of Petroleum and Minerals
Department of Math & Stat
Math 202, Section 04 (101)
Quiz 5

Name: _____

ID #: _____
(Show Your Work)

1. Rewrite the given expression as a single power series whose general term involves

$$x^k \sum_{n=2}^{\infty} n(n-1)c_n x^n + 2 \sum_{n=2}^{\infty} n(n-1)c_n x^{n-2} + 3 \sum_{n=1}^{\infty} n c_n x^n \quad (5 \text{ points})$$

2. Determine the singular point(s) and classify it (them) as regular or irregular for the differential equation $(x^2 - 16)^2 y''(x + 4)y' = -2y$. (5 points)