QUIZ 8 - MATH 152 Friday, April 7

YOUR NAME:_____ George Voutsadakis

Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [8 points] Find whether the series converges absolutely, conditionally or diverges. Describe what each part of you work is for.

   (a) $\sum_{n=1}^{\infty}(-1)^n \frac{1}{\sqrt[5]{n^3}}$

   (b) $\sum_{n=0}^{\infty}(-1)^n \frac{\sqrt{n}}{n^2+1}$

3. [4 points] Use the ratio or the root test to tell whether the following series converges absolutely or diverges. Show all details and explicitly mention if the test is inconclusive.

$$\sum_{n=0}^{\infty}(-1)^n \frac{7^n n}{(n-1)!}$$