Quiz #9

MATH 126 — Calculus II
Friday, Nov 6

Please print your name:

Problem 1. Under which condition does $\displaystyle\sum_{n=1}^{\infty} \frac{1}{n^p}$ converge?

Problem 2. Determine whether the following series converge or diverge. Make sure to indicate a reason!

(a) $\displaystyle\sum_{n=1}^{\infty} \frac{n-2}{n^3-n^2+3}$

(b) $\displaystyle\sum_{n=1}^{\infty} \frac{1}{2\sqrt{n}+\sqrt[3]{n}}$

(c) $\displaystyle\sum_{n=1}^{\infty} \frac{5^n}{\sqrt{n}\,4^n}$

Problem 3. For which values of x does $\displaystyle\sum_{n=0}^{\infty} 2^n x^n$ converge? Evaluate the series (as a function of x) for these values.

Armin Straub
straub@southalabama.edu