Quiz #7

MATH 126 — Calculus II
Friday, Oct 23

Please print your name:

Problem 1. Determine whether the following series converge or diverge. If they converge, determine their value.

No need to simplify any values!

(a) $\displaystyle\sum_{n=2}^{\infty} 2^n =$

(b) $\displaystyle\sum_{n=2}^{\infty} \frac{\sqrt{n}}{\log n} =$

(c) $\displaystyle\sum_{n=2}^{\infty} 2^{-n} =$

(d) $\displaystyle\sum_{n=0}^{\infty} \frac{2^n + 3^n}{5^n} =$

Problem 2. Express $0.\bar{7} = 0.7777...$ as a quotient of two integers.

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.

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