

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!

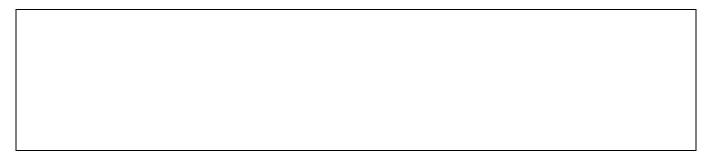
(a)
$$\sum_{n=2}^{\infty} 2^n =$$

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

$$\sum_{n=2}^{\infty} 2^{-n} =$$

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

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



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