

Mathematics II

Dr. Muath Shiyab

Dr. Amin Witno

Exam 1

17-11-2003

1. Decide whether the following series are convergent absolutely, convergent conditionally, or divergent.

a.
$$\sum \frac{(-1)^n \ln n}{n}$$

b.
$$\sum \frac{4^n + 6^n}{7^n}$$

2. Find the interval of convergent of the following power series

$$\sum \frac{(-1)^n \times (x-2)^n}{n \times 4^n}$$

3. Write the Taylor's polynomial for the function $f(x) = \sqrt{x+1}$ centered at $a = 0$, up to $n = 5$.