

Honors Calculus, Math 1450- Assignment 8, due Thursday December 3.

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Sequences and Series

(1) Questions in 11.4 : 20, 24, 39, 40, 42

(2) Questions in 11.5 : 4, 6, 16, 34

(3) Questions in 11.6 : 10, 14, 16, 20, 22, 30, 31, 34

(4) Determine where or not the following series converge. State precisely your reasons.

(a)

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

(b)

$$\sum_{n=3}^{\infty} \frac{n^{1/2} + 7}{n^2 - 2n}$$

(c)

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

(d)

$$\sum_{n=1}^{\infty} \frac{n!}{2^{2^n}}$$

(5) Find the points x at which the power series

$$\sum_{n=1}^{\infty} \frac{(x-2)^n}{n3^n}$$

converges.

(6) Find the points x at which the power series

$$\sum_{n=1}^{\infty} \frac{x^n}{n!}$$

converges.