

Due March 28, 2003

Show all work for credit.

Leave all answers as exact answers unless otherwise stated.

1. For each of the following series, show if it converges or not. If the series converges, estimate the series within .005 of the true solution. You may use your calculator on this quiz.

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

(b)
$$\sum_{n=2}^{\infty} \frac{4}{n^2 - 1}$$

$$(c) \sum_{n=1}^{\infty} \frac{(-1)^{n-1}(3n^2 + 5)^2}{4n^4 - 2}$$

$$(d) \sum_{n=1}^{\infty} \frac{\cos(n\pi)}{n+1}$$

$$(e) \sum_{n=1}^{\infty} \frac{1+n+n^2}{\sqrt{1+n^2+n^6}}$$