

Calculus II - Spring 2014

Quiz #4, April 16, 2014

In the following problems you are required to show all your work and provide the necessary explanations everywhere to get full credit.

1. Determine whether the series is convergent or divergent. If it is convergent, find its sum.

(a)
$$\sum_{k=1}^{\infty} \frac{k+1}{2k+5}$$

(b)
$$\sum_{k=3}^{\infty} \frac{1+2^{k-1}}{3^{2k+1}}$$

2. Determine whether the series converges or diverges.

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

$$(b) \sum_{n=2}^{\infty} \frac{1}{n \ln^5 n}$$

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