1. Determine whether the following series converge conditionally, converge absolutely, or diverge. For those that converge, find upper and lower bounds.

$$\begin{array}{ll} \text{(a)} \sum_{j=1}^{\infty} \frac{(-1)^j}{\sqrt{2j}(j+1)} & \text{(c)} \ \sum_{k=1}^{\infty} (-1)^{k+1} \frac{k^2}{k^2 - 5k} \\ \text{(b)} \ \sum_{n=1}^{\infty} (-1)^{n+1} \frac{n^5}{n^6 + 17} & \text{(d)} \ \sum_{k=1}^{\infty} \frac{\cos(k)}{k^4 + 1} \end{array}$$

2. Determine whether the following series converge conditionally, converge absolutely, or diverge. For those that converge, approximate each to within 10^{-6} .

(a)
$$\sum_{k=1}^{\infty} (-1)^{k+1} \frac{1}{k^2+1}$$
 (b) $\sum_{k=2}^{\infty} \frac{7-\sin(k)}{k^2+14k}$

Math 104-Calculus 2 (Sklensky)

In-Class Work

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