Math 2B Worksheet: 11.4 Comparison Test + 11.5 Alternating Series Test

Write your names and Student ID numbers at the top of the page
Determine whether the series converge.

1. $\displaystyle\sum_{k=1}^{\infty} \frac{k+1}{k\sqrt{k}}$

2. $\displaystyle\sum_{n=1}^{\infty} \frac{n \sin^2 n}{1+n^3}$

3. $\displaystyle\sum_{k=1}^{\infty} \frac{1}{\sqrt{k^2+1}}$

4. $\displaystyle\sum_{n=1}^{\infty} \frac{n\cos(n\pi)}{2^n}$

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

6. $\displaystyle\sum_{k=1}^{\infty} (-1)^{k+1} k e^{-k}$