MATH 166
SUMMER 2012
QUIZ 21

1. (25 pt) Determine if the following series converge.

a) $\displaystyle\sum_{n=3}^{\infty} \frac{\sqrt[3]{n^2+1}}{\sqrt{n^3+4}}$ b) $\displaystyle\sum_{n=0}^{\infty} \frac{(3n)!}{6^{2n}(n!)^3}$ c) $\displaystyle\sum_{n=1}^{\infty}(1-\cos(\frac{1}{n}))$

d) $\displaystyle\sum_{n=2}^{\infty}(-1)^n \frac{(\ln(n))^n}{n}$ e) $\displaystyle\sum_{n=1}^{\infty} \ln(\frac{n}{n+1})$