

MATH U242
QUIZ #6

Name _____

For full credit show all of your work.

Exercise 1 (4pts). Determine whether the following sequences converge or diverge. If the sequence converges find the limit.

(i) $\frac{n+1}{3n-1}$

(ii) $\frac{\cos(n)^2}{2^n}$

Exercise 2 (6pts). Determine whether the following series converge.

(i) $\sum_{n=1}^{\infty} \sqrt[n]{2}$

(ii) $\sum_{n=1}^{\infty} \frac{n-1}{n4^n}$

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