

## 11.6 - Ratio and Root Test

### Calculus II

Ratio Test - converges or diverges?

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

2.  $\sum_{n=0}^{\infty} \frac{(2n)!}{5n+1}$

3.  $\sum_{n=3}^{\infty} \frac{e^{4n}}{(n-2)!}$

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

Root Test - converges or diverges?

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

2.  $\sum_{n=0}^{\infty} \frac{n^{1-3n}}{4^{2n}}$

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