

Math 2B Worksheet: 11.6 Ratio and Root Tests

Write your names and Student ID numbers at the top of the page

Use either the ratio or the root test to determine if the series converges.

1. $\sum_{k=1}^{\infty} k e^{-k}$

2. $\sum_{k=1}^{\infty} \frac{(-2)^k}{k^k}$

3. $\sum_{n=1}^{\infty} \frac{n^{100} 100^n}{n!}$

$$4. \sum_{n=1}^{\infty} (\arctan n)^n$$

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

$$6. \sum_{n=1}^{\infty} \frac{(-3)^n}{(2n+1)!}$$