Homework Set 16

(sect 8.4: Ratio Test)

Use the ratio test to determine whether each series converges or diverges.

$$\sum_{n=0}^{\infty} \frac{n5^n}{n!}$$

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

$$\sum_{n=2}^{\infty} ne^{-n}$$

$$\sum_{k=1}^{\infty} \frac{k^k}{k!}$$

$$\sum_{n=0}^{\infty} \frac{(-1)^n \cdot 3^{n+2}}{2^{n+1}(n-1)^2}$$