



UNIVERSIDADE FEDERAL DA GRANDE DOURADOS
Cálculo Diferencial e Integral II — Lista 10
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(1) Determine se as séries são convergentes ou divergentes

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

(b) $\sum_{k=1}^{\infty} \frac{1}{k^{\pi}}$

(c) $\sum_{k=1}^{\infty} k^2 e^{-k}$

(d) $\sum_{n=1}^{\infty} \frac{n!}{e^{n^2}}$

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

(f) $\sum_{n=1}^{\infty} \frac{n}{5^n}$

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

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

(i) $\sum_{n=1}^{\infty} \frac{(-1)^n}{\ln n}$

(j) $\sum_{n=1}^{\infty} \frac{10^n}{(n+1)4^{2n+1}}$