

Math 1B Discussion Problems 12 Mar

1. Determine whether each of the following series converges absolutely, converges conditionally, or diverges.

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

(b) $\sum_{n=1}^{\infty} (-1)^{n-1} n^{-1/3}$

(c) $\sum_{n=1}^{\infty} \frac{\ln n}{n^3}$

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

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

(f) $\sum_{n=1}^{\infty} \ln\left(\frac{n}{3n+1}\right)$

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

(h) $\sum_{n=1}^{\infty} \frac{(-3)^n}{n!}$