

Math 1B Discussion Problems 5 Mar

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

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

(b) $\sum_{n=1}^{\infty} \sqrt{\frac{n+4}{n^4+4}}$

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

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

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

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

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

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