MATH 151 — Exam 3 Review 2 — Spring

1. Test the following for convergence or divergence.

(a) $\displaystyle\sum_{n=1}^{\infty} \frac{n+1}{2n-3}$ D

(b) $\displaystyle\sum_{n=1}^{\infty} \left(\frac{3}{5^n} + \frac{2}{n}\right)$ D

(c) $\displaystyle\sum_{n=1}^{\infty} \frac{3n+2}{n(n+1)}$ D

(d) $\displaystyle\sum_{n=2}^{\infty} \frac{1}{n(\ln\ n)^2}$ C

(e) $\displaystyle\sum_{k=1}^{\infty} \frac{\sqrt{k+2}}{2k^2 + k + 1}$ C

(f) $\displaystyle\sum_{n=1}^{\infty} \frac{5 + 2n}{(1+n^2)^2}$ C

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

(h) $\displaystyle\sum_{n=1}^{\infty} \frac{1 + n + n^2}{\sqrt{1 + n^2 + n^6}}$ D

(i) $\displaystyle\sum_{n=1}^{\infty} n\left(\frac{2}{3}\right)^n$ C

(j) $\displaystyle\sum_{n=1}^{\infty} \frac{\cos(n\pi/3)}{n!}$ C