MA114 Summer 2018
Worksheet 11 – Alternating Series & Absolute vs. Conditional Convergence
6/26/18

1. Use the appropriate test - Divergence Test, Comparison Test, or Limit Comparison Test - to determine whether the following infinite series are convergent or divergent.

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

b) $\displaystyle\sum_{n=0}^{\infty} \frac{n + 1}{n^2 \sqrt{n}}$

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

d) $\displaystyle\sum_{n=0}^{\infty} \frac{n}{n^2 - \cos^2(n)}$

e) $\displaystyle\sum_{n=0}^{\infty} \frac{4^n + 2}{3^n + 1}$

f) $\displaystyle\sum_{n=0}^{\infty} \frac{2}{n^2 + 5n + 2}$