

If you think some of these are wrong, please email me.

Series Mish-Mash

1. Determine whether each of the following series is absolutely convergent, conditionally convergent, or divergent. Are there any other tests that would have worked?

- | | | |
|--------|--------|--------|
| (a) AC | (j) AC | (s) AC |
| (b) AC | (k) D | (t) AC |
| (c) AC | (l) D | (u) D |
| (d) CC | (m) AC | (v) D |
| (e) AC | (n) AC | (w) AC |
| (f) AC | (o) D | (x) D |
| (g) D | (p) CC | (y) D |
| (h) AC | (q) AC | (z) CC |
| (i) AC | (r) D | |

2. AC: $1 < p$, CC: $0 < p \leq 1$, D: $p \leq 0$

3. $p > 1$

4. Both converge

5. $\sum \frac{2+\sin n}{n}$

6. State the conditions necessary to use each of the following tests:

- (a) pos, decreasing, f must be cts
- (b) pos
- (c) b_n dec, $\lim = 0$. Must be alternating
- (d) $L \neq 1$