

236 Quiz 7

March 29, 2011

Name: _____

Name: _____

Name: _____

Work in groups but do NOT split up problems or tasks. You must discuss each problem as a group and agree on a final answer. Hand in one quiz per group.

You may use your hand-written Notebooks but no other materials and no technology at all. Please keep your discussions quiet so as not to disturb or inform other groups.

1. Determine the convergence or divergence of each of the following series, using the methods listed. Show your work carefully and make good arguments to support your answers.

a) $\sum_{k=1}^{\infty} \frac{k^3}{2^{\sqrt{k^3}}}$ ← use the Root Test; carefully justify algebra/limit calculations.

b) $\sum_{k=1}^{\infty} \frac{k^k}{k!}$ ← use the Ratio Test; carefully justify algebra/limit calculations.

c) $\sum_{k=1}^{\infty} \frac{k!}{(k+2)!}$ ← show Ratio Test is inconclusive and then use some other test.