

MA114 Summer 2018
Worksheet 12 – Root and Ratio Tests – 7/02/18

1. For each series below, apply the ratio or root test to determine the convergence of the series. If the test is inconclusive, say so.

(a)
$$\sum_{n=1}^{\infty} \frac{10^n}{2^{n^2}}$$

(b)
$$\sum_{k=0}^{\infty} \left(\frac{k}{k+10} \right)^k$$

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

(d)
$$\sum_{m=2}^{\infty} \frac{1}{5^m + 1}$$