

Name: _____

MA 2320 Quiz 7

1. $\sum_{n=1}^{\infty} ne^{-n^2}$. Hint Integral test.
2. $\sum_{n=1}^{\infty} \frac{n}{1+n^2}$. Hint Integral test.
3. $\sum_{n=1}^{\infty} \frac{2}{n^3}$. P-series
4. $\sum_{n=1}^{\infty} \frac{n^2}{n!}$. Ratio test.
5. $\sum_{n=1}^{\infty} \frac{n!}{n^n}$. Ratio test.
6. $\sum_{n=1}^{\infty} \frac{(2n)!}{n^n}$. Ratio test.
7. $\sum_{n=1}^{\infty} \left(\frac{n+2}{3n-1} \right)^n$. Root test.
8. $\sum_{n=1}^{\infty} \left(1 + \frac{1}{n} \right)^{n^2}$. Root test.
9. $\sum_{n=1}^{\infty} \left(1 - \frac{4}{n} \right)^{n^2}$. Root test.
10. $\sum_{n=1}^{\infty} \left(1 - \frac{4}{n^2} \right)^{n^2}$. Divergence test.
11. $\sum_{n=1}^{\infty} \frac{4}{n^2+1}$. Comparison test.
12. $\sum_{n=1}^{\infty} \frac{\sqrt{n+1}}{n^2+2}$. Limit comparison test.
13. $\sum_{n=1}^{\infty} \frac{\sqrt{n^3+1}}{n^2+4}$. Limit comparison test.