Math 102 (152) **Sec. 23** **Quiz 7**

Name: ID:

Test the convergence and divergence of the series:

$$\sum_{k=1}^{\infty} \frac{\sqrt[3]{k} - 1}{k\left(\sqrt{k} + 1\right)}$$

$$\sum_{n=1}^{\infty} \frac{e^{1/n}}{n^2}$$

$$\sum_{k=1}^{\infty} \frac{2^{k-1}3^{k+1}}{k^k}$$

$$\sum_{k=1}^{\infty} \frac{5^k}{3^k + 4^k}$$

$$\sum_{n=1}^{\infty} (-1)^n \frac{\ln n}{\sqrt{n}}$$

$$\sum_{n=1}^{\infty} \frac{1}{n + n\cos^2 n}$$

$$\sum_{j=1}^{\infty} (-1)^j \frac{\sqrt{j}}{j + 5}$$

$$\sum_{n=1}^{\infty} \frac{1}{n^{1+1/n}}$$

$$\sum_{n=1}^{\infty} \frac{1 \cdot 3 \cdot 5 \cdot \cdots \cdot (2n-1)}{2 \cdot 5 \cdot 8 \cdot \cdots \cdot (3n-1)}$$

$$\sum_{n=1}^{\infty} n \sin(1/n)$$