QUIZ 6

1. 5 points Decide whether the following series converges absolutely, converges conditionally, or diverges. Justify your answer.

$$\sum_{n=1}^{\infty} (-1)^n \frac{1}{\sqrt[3]{n}}$$

2. 5 points Decide whether the following series converges absolutely, converges conditionally, or diverges. Justify your answer.

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

3. $\boxed{5 \text{ points}}$ Decide whether the following series converges absolutely, converges conditionally, or diverges. Justify your answer.

$$\sum_{n=1}^{\infty}(-1)^n\,\frac{1}{n^2}$$

4. $\boxed{5 \text{ points}}$ Approximate the following series by the sum of the first four terms. Estimate the magnitude of the error involved in using this approximation.

$$\sum_{n=0}^{\infty}(-1)^n\,\frac{1}{n^2+4}$$