

Exam 3 Test Prep

Calculus II

1. List the first 5 terms in the sequence, starting at $n=1$.

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

$$a_1 =$$

$$a_2 =$$

$$a_3 =$$

$$a_4 =$$

$$a_5 =$$

2. Find the general form.

$$\left\{ \frac{-1}{2}, \frac{4}{3}, \frac{-9}{4}, \frac{16}{5}, \dots \right\}$$

3. Determine if the sequence converges or diverges.

$$\lim_{n \rightarrow \infty} \frac{2n^2+5n}{n^3+4n^2+1}$$

4. Find the first 3 sums.

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

$$s_1 =$$

$$s_2 =$$

$$s_3 =$$

5. Use Comparison Test.

$$\sum_{n=1}^{\infty} \frac{n}{n^4+n^2+1}$$

6. Use Ratio Test.

$$\sum_{n=1}^{\infty} \frac{n^2 4^n}{n!}$$