Name: _____ Mark: _____

Mini-math AP Calculus BC: Friday, October 22, 2021 (8 minutes)

1. (2 points) If the series $S = \sum_{n=1}^{\infty} \frac{(-1)^n}{\sqrt{n}}$ is approximated by the kth partial sum S_k, what is the least value of k for which the alternating series error bound guarantees that $|S - S_k| \leq \frac{1}{100}$?

2. (2 points) For what values of p is the following series conditionally convergent?

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