

10. [14 points] Determine if the following series converge or diverge. Circle your final answer choice for each. Fully justify your answer including using proper notation and showing mechanics of any tests you use.

a. [7 points] $\sum_{n=1}^{\infty} (-1)^n \frac{n}{n^2 + 4n - 1}$

Circle one:

Converges

Diverges

b. [7 points] $\sum_{n=1}^{\infty} \frac{2n - 1}{n^2 + n + 2}$

Circle one:

Converges

Diverges