Name: Section: 1 2

Determine if the following series converge or diverge. You may use any test. Show your work and clearly state which test you are using.

1. $\displaystyle\sum_{n=1}^{\infty} \frac{(-1)^n}{\sqrt{n}+1}$.

2. $\displaystyle\sum_{n=1}^{\infty} \frac{1}{3^n+n}$.

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

4. $\displaystyle\sum_{n=2}^{\infty} \frac{(-5)^n}{n^2 7^n}$

5. $\displaystyle\sum_{n=2}^{\infty} \frac{1}{\sqrt{n}-1}$

6. $\displaystyle\sum_{n=1}^{\infty} \frac{2n-1}{n^3-9}$.