

6. [14 points] Determine whether each of the following series converge conditionally, converges absolutely, or diverges and circle the appropriate answer. **Fully justify** your answer including using **proper notation** and showing mechanics of any tests you use.

a. [7 points]

$$\sum_{n=1}^{\infty} \frac{(-1)^n}{6 + \sqrt{n}}$$

Circle one: **Absolutely Converges** **Conditionally Converges**
Diverges

6. (continued) Here is a reproduction of the instructions for the problem:

Determine whether each of the following series converge conditionally, converges absolutely, or diverges and circle the appropriate answer. **Fully justify** your answer including using **proper notation** and showing mechanics of any tests you use.

b. [7 points]

$$\sum_{n=1}^{\infty} \frac{n^2 + 50n \sin 2n}{n^{7/2}}$$

Circle one: **Absolutely Converges** **Conditionally Converges**
Diverges