

9. [12 points] Determine whether the following series is absolutely convergent, conditionally convergent, or divergent. **Fully justify** your answer including using **proper notation** and **showing mechanics** of any tests you use. Circle your final answer choice.

$$\sum_{n=1}^{\infty} \frac{n \cdot (-1)^n}{n^2 + n^{1/2}}$$

Circle one:

**Absolutely Convergent**

**Conditionally Convergent**

**Divergent**