

1. [10 points] Show that the following series converges. Also, determine whether the series converges conditionally or converges absolutely. Circle the appropriate answer below. **You must show all your work and indicate any theorems you use to show convergence and to determine the type of convergence.**

$$\sum_{n=2}^{\infty} \frac{(-1)^n \ln(n)}{n}$$

CONVERGES CONDITIONALLY

CONVERGES ABSOLUTELY