Spring 2024 Math 102, Section 11
Quiz 1

Name: _____

Time limit: 20 minutes

1. (1 point) Fill in the blanks with either "convergent" or "divergent" so that the following statement is true:

The **sequence** $\{a_n\}_{n=1}^{\infty}$ defined as

$$a_n = \sum_{k=1}^{n} \frac{1}{k} \quad (n \geq 1)$$

is _____.

(You don't need to justify your answer for this question.)

2. (9 points) Using the Integral Test (IT), determine whether the **series**

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

converges or diverges.

(Justify your claims.)