MATH 202, Spring 2024 **Name:** _____

In class work 17 **Row and Seat**: _____

In class work **17** has questions **1** through **1** with a total of **4** points.

"The miracle is this: the more we share the more we have." LEONARD NIMOY

1. Use the integral test to decide if each series *diverges* or *converges*.

2 (a) $\displaystyle\sum_{k=1}^{\infty} \frac{\ln(k)}{k^2}$. You'll need to check that the function $x \mapsto \frac{\ln(x)}{x^2}$ eventually decreases. It doesn't decrease on $[1,\infty)$, but you can show that it eventually decreases.

2 (b) $\sum_{k=1}^{\infty} \frac{1}{(k+5)(k+7)}$