

5. (52 points) Rigorously determine whether or not the following converge or diverge. You should make clear to the grader any thoughts and/or processes that you use.

a.  $\sum_{n=6}^{\infty} \frac{\ln(n) + 3}{n - 4}$

b.  $\sum_{n=1}^{\infty} \frac{n + \sin(n) + 1}{e^n - n - 1}$