

Problem 1 Compute the limit $\lim_{n \rightarrow +\infty} \frac{e^n + n}{n^6 - \pi^n}$. You may use any properties of limits that have been covered. In particular, you do not need to provide an ε proof.

Problem 2 Compute the limit of $\lim_{n \rightarrow +\infty} \frac{n^2 - n}{1 - n - n^2}$. Prove the convergence of the limit using an ε proof.