# Math 101, Calculus I, Fall 2023, Sec. 1, HTK Quiz 6, Fri., Dec. 8 

1. (a) Find the absolute maximum value of $f(x)=\frac{\ln x}{x}$.
(b) Using part (a), decide which of $e^{\pi}$ and $\pi^{e}$ is larger.
2. Evaluate $\lim _{x \rightarrow 0^{+}} \frac{e^{-1 / x}}{x}$.

Evaluate $\lim _{x \rightarrow \infty}\left(x e^{1 / x}-x\right)$.

