

(1) [5] Evaluate $\lim_{x \rightarrow \infty} \frac{\cosh(x)}{e^x}$.

(2) [5] Evaluate $\lim_{t \rightarrow 0} \frac{e^t - 1}{t^5}$.

(3) [5] Evaluate $\lim_{x \rightarrow 0^+} x^{(x^2)}$. (Hint: $a^x = e^{x \ln(a)}$).