

WRITE YOUR NAME AND CODE ON THE BACK.

*Show your work!*

1. { 12 points } Show that the given sequence is strictly increasing or strictly decreasing. If it is neither, state whether the sequence is eventually strictly increasing or eventually strictly decreasing.

(A)  $\left\{ \frac{3^n}{n!} \right\}_{n=2}^{\infty}$

(B)  $\left\{ n^4 e^{-n} \right\}_{n=1}^{\infty}$

(C)  $\left\{ \frac{1}{n - \ln n} \right\}_{n=1}^{\infty}$