

Both numerator & denominator ⑧

→ 0/0

$$\lim_{x \rightarrow \infty} \frac{\ln(1 + 1/x)}{1/x} = \lim_{x \rightarrow \infty} \frac{(-1/x^2)/(1 + 1/x)}{-1/x^2}$$

$$= \lim_{x \rightarrow \infty} 1/(1 + 1/x) = \underline{\underline{1}}$$

$$\therefore (1 + 1/x)^x \rightarrow e' = \underline{\underline{e}}$$