

第 8 章作业参考答案

P253/3:

(1) $\gamma_k = \frac{1}{k} \rightarrow 0$, $\frac{|\gamma_{k+1}|}{|\gamma_k|} = \frac{k}{k+1} \rightarrow 1$, $\gamma_k = \frac{1}{k} \rightarrow 0$ 线性收敛。

(2) $\gamma_k = \left(\frac{1}{k}\right)^k \rightarrow 0$, $\frac{|\gamma_{k+1}|}{|\gamma_k|} = \frac{k^k}{(k+1)^k} \rightarrow 0$, 并且 $\alpha > 1$ 时 $\frac{|\gamma_{k+1}|}{|\gamma_k|^\alpha} = \frac{k^{\alpha k}}{(k+1)^k} \rightarrow \infty$,

$\gamma_k = \left(\frac{1}{k}\right)^k \rightarrow 0$ 超线性收敛。