

(SYA)

$$\text{Def: } \limsup_{n \rightarrow \infty} a_n = \lim_{n \rightarrow \infty} b_n$$

$$= \lim_{n \rightarrow \infty} \left(\sup \{a_k : k \geq n\} \right)$$

Clearly, $\inf_n \left(\sup_{k \geq n} a_k \right)$

$$\sup L \leq \lim_{n \rightarrow \infty} a_n$$

Can you show they
are equal?

What about
 $\inf L$?