

exercise 1:

In class we showed that if $\lim a_n$ exists in \mathbb{R} then $\limsup a_n = \lim a_n$. Show that this is still true if $\lim a_n$ is ∞ or $-\infty$.

exercise 2:

If c_n and d_n are two bounded sequences is $\limsup(c_n d_n)$ equal to $(\limsup c_n)(\limsup d_n)$?

exercise 3:

Let a_n and b_n be two bounded sequences. Show that $\limsup(a_n + b_n) \leq \limsup a_n + \limsup b_n$.