Writing Of Mathematics

Quiz 9

 $http://www.isibang.ac.in/{\sim}athreya/Teaching/wom19$

Name:	Score:	

1. Let $\{x_n\}_{n=1}^{\infty}$ and $\{y_n\}_{n=1}^{\infty}$ be a bounded sequence of real numbers. Let $\{z_n\}_{n=1}^{\infty}$ be given by

$$z_n = x_n + y_n$$

for all $n \geq 1$. Show that

$$\limsup_{n \to \infty} z_n \le \limsup_{n \to \infty} x_n + \limsup_{n \to \infty} y_n$$