Prove that it sey {an}_n=1 tends to  /imit L on n > 00, then for any fixed  /imit L on n > 00, then for any fixed  tends
number m > 0, the seg & Man good tends
to limit ML
Proof:  (By definition YE >0 INEN such that)  Ob Limit and ANN Ian-al <e< td=""></e<>
So we are given such that Yn>N  an-LI
$\sim 100$
1001100
$ a_n-L  < \frac{1}{2}$
Such that $\forall n > N$   $a_n - L \mid -m$
For some number M>0  For some number M>0  but  an-L  2 mm = m  an-L  26  but  an-L  2 mm = m  an-L  26
but   an -L   2 Em > mit this on
but   an-L   2 m = Since m>0 we can rewrite this on  m an-L 2E or  man-mL 2E
1m/1an-L/2E
therefore {Man} tends to
if {an}_n=1 tends to Limit L