limit Inferior of a sequence of numbers. liminf $x_n = \sup_{n \ni n} \inf_{m \ni n} x_m$ limit Inferior of a sequence of setts. liminf En = Un no Em wts p(liminfEj) < liminf p(Ej) y(Fn) = y((nEj) = y(5)) the sequence $F_n = \bigcap_n^\infty E_j$ is mueasing. p(Fn) < inf p(Ej) Both sides are increasing in n, supp(Fn) < sup inf p(Ej). By continuity from lelow on the belt sup p(Fn) = p(Unit Fn) < liminf p(Ei)

18 theorem.

{Ej}, of M, and Eizez 2 - and p(Ei) 2 +es.

then p(N, of) = lim p(Ej),

then proof The key is that we can do some

subtraction mage.

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1.8d We get a sequere let
                            p(F) ≤ p(E1) 2+∞
 (ENEi) = Fj, with all
and EINES & EILES+1.
 Ej 2 Ej +1. (Removing bess => get is larger)
then U(EIIE) = EII(NE)
    r(UEINEj)= lim r(EINEj) = r(EINOEJ):
  and. Finite measure of allows subtracks
     y(Ei)-y(NEj) = & lim y(Ei 1Ej) = lim y(Ei) -y (Ej)
 (37. 4(VEZ) = lim h(E))
 wts limsup y(E;) < y(limsup E;).
 proof sup y(Ej) & y(UnEj) Hnzil
  set Fn=UnEj, then {Fn3,0 is a decreasing
  sequence of sets with p(Fn) & p(limsup Es).
Both sides of the equation (By 1.8d).
  Both sides of the equation
   are decreasing in n, so
   limsup p(Ej) < jnf p(Fn) = p(limsup Ej).
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