1)... (an) ----- a

Warn gill ...?

(i) liming J-00, and = J-00, a] @winde ob a georigt

U 17-00, 0K] NEW KYN

② Sei x ∈ J -∞, a] lel.

1. Fall x + a E := a-x 3 NEN Yuz N: [an-a/c E

 $\bigcap \neg \omega, \alpha, \gamma = \neg \neg \omega, \inf_{n \geq N} (\alpha_n) \rightarrow X = X \in \bigcup \bigcap_{n \in N} \neg \neg \alpha_n \gamma$

2. Fall x=a

Falls an monoton fallend: Then: a c]-os, ax] => x=a eU n]-os, ax]

Falls on konstant : YKEN: a E] - OO, a K], da ak = a => -11 - V Falls on monoton wadsend: YKEN: a & J-as, ax], da ax < a

(ii) lim sup]-00, an] =]-00, a]

© oben gereigt

NU J-00, ax]

(2) Sei x & J-00, a] bel.

1. Fall x + a \(\xi := \frac{a-x}{2} \) \(\text{3 NEW Vn \(\text{N} : |a_n-a| < \xi \)

 $\bigcup]-\infty, \alpha_n] =]-\infty, \sup_{n \ge n} (\alpha_n)] \ni x$

x ∈ ∩ U]-∞, ~]

2 Fall x= a

Falls on monoton felland: YKEN: a EJ-ao, ak] => x=a E () UJ-ao, ak] new K>n

Falls an monofon we deend: YKEN: a & J-D, aKJ => X=a & O U J-OD, OKJ