

TEOREMA 5. - (DEL CONFRONTO) o (CRITERIO DI REGOLARITÀ) 2.6

$$i) \left[\begin{array}{l} \forall n > \nu, a_n \leq b_n \leq c_n \\ \lim a_n = l = \lim c_n \end{array} \right] \Rightarrow \lim b_n = l$$

$$ii) \left[\begin{array}{l} \forall n > \nu, a_n \leq b_n \\ \lim a_n = +\infty \end{array} \right] \Rightarrow \lim b_n = +\infty$$

$$iii) \left[\begin{array}{l} \forall n > \nu, b_n \leq c_n \\ \lim c_n = -\infty \end{array} \right] \Rightarrow \lim b_n = -\infty$$

DIM.

$\approx i \approx$

$$\left[\begin{array}{l} \lim a_n = l \Leftrightarrow \forall \varepsilon > 0, \exists \nu_1 \in \mathbb{N}: \forall n > \nu_1, l - \varepsilon < a_n < l + \varepsilon \\ \lim c_n = l \Leftrightarrow \forall \varepsilon > 0, \exists \nu_2 \in \mathbb{N}: \forall n > \nu_2, l - \varepsilon < c_n < l + \varepsilon \end{array} \right] \Rightarrow$$

$$\Rightarrow \forall n > \nu_3 = \max \{ \nu, \nu_1, \nu_2 \},$$

$$l - \varepsilon < a_n \leq b_n \leq c_n < l + \varepsilon$$

$$l - \varepsilon < b_n < l + \varepsilon$$

□