

⑤

2

si ha:

$$\boxed{\alpha \geq 2} \quad (\Leftrightarrow \beta \geq 1)$$

$$0 \leq \sum_{[0, 2\pi]} H \leq \frac{\sum_{\substack{2 \\ 2}}^{\alpha-1} 1}{2}$$

$$\Rightarrow \lim_{s \rightarrow 0} \sup_{[0, 2\pi]} H = 0, \text{ f. differ. se } \alpha \geq 2$$

$$\boxed{\alpha < 2} : (\Leftrightarrow \beta < 1)$$

$$\sup_{[0, 2\pi]} H \geq \begin{cases} C(\beta) S^{2\alpha-3} \xrightarrow{S \rightarrow 0^+} +\infty & \alpha < 3/2 \\ C(3/2) & \alpha = 3/2 \end{cases}$$

2 non è differ. in $(0,0)$ e $\alpha \leq 3/2$

Define $\alpha \in (3/2, 2)$:

$$\int_0^{x-1} \max_{[0,1/2]} \psi \in [c(\beta) \rho^{2x-3}, c'(\beta) \rho^{2x-3}]$$

$$\int^{\alpha-1} \max_{[1/2, 1]} \varphi \in \left[\frac{2^{-\beta-1} \int^{\alpha-1}}{\frac{\beta^2}{2} + 1}, \frac{\int^{\alpha-1}}{\frac{\beta^2}{2} + 1} \right]$$

da cui poiché $\gamma \in (0, 1)$ e $2\alpha - 3 < \alpha - 1$ si ha $\alpha < 2$

$$C(\beta) \int^{2\alpha-3} \leq \sup_{[0, 2\pi]} H \leq C'(\beta) \int^{2\alpha-3}$$

$$\int^{\alpha-1} \max_{[0, 1/2]} \psi$$

$$\Rightarrow \lim_{\delta \rightarrow 0} \sup_{[0, 2\delta]} f = 0 \Rightarrow \text{2 differ. in } (0,0)$$