

per quali $a > 0$ il limite per $x^2 + y^2 \rightarrow +\infty$ di $f(x,y) = (x|y|^a)/(1+x^4+y^2)$ esiste?

$$1) \quad y=0 \quad \leadsto \quad \frac{x |y|^a}{1+x^4+y^2} = 0 \quad \forall a > 0$$

$$2) \quad x=0 \quad \leadsto \quad \frac{x |y|^a}{1+x^4+y^2} = 0 \quad \forall a > 0$$

$$3) \quad x \neq 0 \wedge y \neq 0$$

$$f(x,y) = \frac{x |y|^a}{1+x^4+y^2}$$

$$f(\delta, \delta^b) = \frac{\delta^{1+ab}}{1+\delta^4+\delta^{2b}} \rightarrow \frac{1}{2} \quad \text{PER } b=2 \quad a = \frac{3}{2}$$

$\delta > 0$

\leadsto IL LIMITE NON ESISTE