

riepilogo secondo compito

(1) 1.

MULTIPLE CHOICE marked out of 1.0 penalty 0.10 One answer only Shuffle

Calcolare

$$\inf_{y \in \mathbb{R}} \sup_{x \in \mathbb{R}} \frac{x}{1 + x^2 + y^2}$$

- $\frac{1}{4}$
- 0 ✓
- $-\infty$
- 1

(2) 2.

MULTIPLE CHOICE marked out of 1.0 penalty 0.10 One answer only Shuffle

Calcolare

$$\lim_{x \rightarrow 0} \frac{x^4}{\frac{4 \cos(\frac{1}{2} \arctg \frac{1}{x^2})}{\sqrt{\cos x + \cos(3x)}} - \sqrt[3]{8 + 42x^2}}$$

- $\frac{84}{845}$
- $\frac{845}{48}$
- $\frac{84}{485}$
- $\frac{485}{48}$ ✓
- $\frac{485}{84}$

(3) 3.

MULTIPLE CHOICE marked out of 1.0 penalty 0.10 One answer only Shuffle

Per quali valori del parametro $\alpha \in \mathbb{R}$ la seguente serie è convergente?

$$\sum_k \left(e - \left(1 + \frac{1}{k} \right)^k \right)^\alpha$$

- $\alpha > 0$
- $\alpha < 0$
- $\alpha > 1$ ✓
- $\alpha < 1$

Total of marks: 3