teorema fondamentale del calcolo

(1) **1.**

$\boxed{\text{Multiple choice}}$ $\boxed{\text{marked out of 1.0}}$ $\boxed{\text{penalty 0.10}}$ $\boxed{\text{One answer only}}$ $\boxed{\text{Shuffle}}$

Calcolare

$$\lim_{h \to 0} \frac{1}{h} \int_0^h \cos(x^2)\, dx.$$

- non esiste
- 0
- 1 ✓
- $+\infty$

(2) **2.**

$\boxed{\text{Multiple choice}}$ $\boxed{\text{marked out of 1.0}}$ $\boxed{\text{penalty 0.10}}$ $\boxed{\text{One answer only}}$ $\boxed{\text{Shuffle}}$

Calcolare la derivata della funzione

$$f(x) = \int_0^{x^2} e^{-t^2}\, dt.$$

- $2xe^{-x^4}$ ✓
- xe^{-x^2}
- $2e^{-x^2}$
- $x^2 e^{-x^2}$

(3) **3.**

$\boxed{\text{Multiple choice}}$ $\boxed{\text{marked out of 1.0}}$ $\boxed{\text{penalty 0.10}}$ $\boxed{\text{One answer only}}$ $\boxed{\text{Shuffle}}$

Calcolare il limite

$$\lim_{x \to e} \frac{e - x + \int_e^x \frac{1}{\ln t}\, dt}{(x - e)^2}$$

- $-\frac{1}{2e}$ ✓
- 0
- $-\infty$
- 1

Total of marks: 3