

integrali 3

(1) 1

MULTIPLE CHOICE

marked out of 1.0

penalty 0.10

One answer only

Shuffle

Calcolare

$$\int_0^{+\infty} e^{-tx} \sin t \, dt.$$

- $\frac{1}{1+x^2}$ ✓
- $\frac{\pi}{2}$
- $+\infty$
- $\operatorname{arctg} x$

(2) 2

MULTIPLE CHOICE

marked out of 1.0

penalty 0.10

One answer only

Shuffle

Calcolare

$$\lim_{x \rightarrow 0} \frac{1}{x^5} \left[\operatorname{arctg} x - \int_0^x e^{-t^2} \, dt \right]$$

- $\frac{1}{10}$ ✓
- 1
- e
- $\frac{\pi}{2}$

(3) 3

MULTIPLE CHOICE

marked out of 1.0

penalty 0.10

One answer only

Shuffle

Calcolare

$$\int_0^{\pi} \frac{\cos x}{\pi x - x^2} \, dx$$

- è indeterminato ✓
- 0
- $+\infty$
- 1

(4) 4

MULTIPLE CHOICE

marked out of 1.0

penalty 0.10

One answer only

Shuffle

Calcolare

$$\lim_{x \rightarrow 0^+} \frac{1}{\sqrt{x}} \cdot \int_x^\pi \frac{\cos t}{\sqrt{\pi t - t^2}} dt.$$

- $-\frac{2}{\sqrt{\pi}}$ ✓
- $-\sqrt{\pi}$
- $-\ln 2$
- $-\sqrt{2}$

(5) 5

MULTIPLE CHOICE

marked out of 1.0

penalty 0.10

One answer only

Shuffle

$$\lim_{x \rightarrow 0} \frac{1}{x^3} \int_{1-x}^{1+x} e^{t^2} dt - \frac{2e}{x^2}$$

- $2e$ ✓
- 0
- $+\infty$
- e^2

Total of marks: 5