integrali impropri 2

(1) **1.**

Calcolare

$$\lim_{x \to 0^+} \frac{1}{x} \int_x^{2x} \frac{1}{\sin t} \, dt$$

- $+\infty$ ✓
- 2
- 1
- π

(2) **2.**

Calcolare

$$\lim_{x \to 0} \frac{1}{x^4} \int_{\sin^2 x}^{\sin x} \frac{2 - t \sin t - 2 \cos t}{e^t - 1} \, dt$$

- $\frac{1}{48}$ ✓
- $\frac{1}{2}$
- 1
- $\frac{1}{6}$

(3) **3.**

Posto

$$I = \int_{-\infty}^{+\infty} e^{-x^2} \, dx$$

calcolare

$$\int_{-\infty}^{+\infty} x^2 e^{-x^2} \, dx.$$

- $\frac{I}{2}$ ✓
- I^2
- $\sqrt{I}$
- $I - 1$

Total of marks: 3