

• $\int_0^{1/2} \frac{dx}{\sqrt{4x+1} + 2\sqrt[4]{4x+1}}$ (ANALISI 1) | gi 23/5/19 (355)

• $\int_{\frac{\pi}{4}}^{\frac{\pi}{2}} \ln \sin x \cdot \frac{1 + \sin x}{\sqrt{\sin x}} \cos x \, dx$ (se è 0 anziché $\frac{\pi}{4}$?)

• $\int_0^1 \frac{\ln(2-x)}{x^2} \, dx$ (se è 2 anziché 1?)

• $\int_1^a \frac{1}{(1+x)x^{3/2}} \, dx, a > 0$ (se è $+\infty$ anziché a ?)

• $\int_0^1 \frac{-2x^2 + x - 6}{x^3 + x^2 + 2x + 2} \, dx$

• $\int_0^1 x^2 (\ln x)^n \, dx = (-1)^n \frac{n!}{3^{n+1}} \quad \forall n \in \mathbb{N}$ (è improprio).

• $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} e^{\sin x} |\sin 2x| \, dx$

• $\int_{-\pi}^{\pi} (|\sin x| + \cos x)(|\cos x| + \sin x) \, dx$

• $\int_a^2 \frac{1}{\sqrt{2x} - \sqrt{x}} \, dx, 0 < a < 2$ (se è 0 anziché a ?)

• $\int_a^1 \frac{1}{\sqrt{x} + \sqrt{x^3}} \, dx, 0 < a < 1$ (se è 0 anziché a ?)

Massimi e minimi relativi, sup. e inf. di:

$$\bullet x^2 + 3y^2 - 4xy + x$$

$$\bullet (8x+y)e^{-xy}$$

$$\bullet e^{-x^2-4y^2+10x-16y}$$

$$\bullet e^{xy} - 2ye^x$$

$$\bullet 4y^2 - 8x^2y - x$$

$$\bullet e^{x^2-y}(y-2x)$$

$$\bullet (x-y)ze^{z^2-xy}$$

$$\bullet 4xy^3 + 3x^2$$

$$\bullet \ln(1+2x^2+3y^2+xy+x+y)$$

$$\bullet e^{-y}(y^2-2x^4)$$

$$\bullet \frac{1}{6+x^2+y^2-4x+2y}$$