Prova libera n. 6 - Soluzioni

1. $-(x^2 + 5)^{-1/2}$.

2. $3(\log x)^{1/3}$.

3. $\dfrac{1}{\sqrt{a^2 + b^2}} \log\left(\dfrac{\sqrt{a^2 + b^2} - a + b\tan(x/2)}{\sqrt{a^2 + b^2} + a - b\tan(x/2)} \right)$.

4. $\sqrt{x} - \log\left(2x + 2\sqrt{x} + 1\right) + \arctan\left(2\sqrt{x} + 1\right)$.

5. $\dfrac{1 - x^2 + (1 + x^2)\log(1 + x^2)}{2}$.

6. $4(\pi - 1) + 2\log 5 - 8\arctan 2$.

7. $\dfrac{1}{2e}$.

8. $2e$.

9. I primi due.

10. $1 < \alpha < 5$.