

Evaluate the following integrals:

1. $\int \ln(2x + 1) \, dx$

2. $\int t \sin 2t \, dt$

3. $\int_0^{\pi/2} \cos^5 x \, dx$

4. $\int \tan^3(2x) \sec^5(2x) \, dx$

5. $\int x^3 \sqrt{9 - x^2} \, dx$

6. $\int \frac{t^5}{\sqrt{t^2 + 2}} \, dt$

7. $\int_0^1 \frac{2x + 3}{(x + 1)^2} \, dx$

8. $\int \frac{dx}{x^4 - x^2}$