

Integration Practice

1. $\int (e^x + x)^2 dx$ [Hint: FOIL first]

2. $\int \frac{1}{\sqrt{x^2 - 4}} dx$

3. $\int x\sqrt{1+x} dx$

4. $\int \tan^2 x \sec^2 x dx$

5. $\int \frac{1}{x\sqrt{9+x^2}} dx$ [Hint: $\int \csc \theta d\theta = -\ln|\csc \theta + \cot \theta| + c$]

6. $\int \frac{\sin x}{2 + \cos x} dx$

7. $\int \sec^6 x dx$

8. $\int x \sec^2 x dx$

9. $\int \frac{6}{(x-1)(x^2+1)} dx$

10. $\int x^3 \sqrt{1-x^2} dx$

11. $\int \frac{8}{x^4 + 2x^3} dx$