

MATHEMATICS 11

Practice Integrals

1. $\int (e^x + x^2)^2 dx$

2. $\int \frac{dx}{\sqrt{x^2 - 2x}}$ (Hint: Complete the square.)

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

4. $\int \sin(\ln x) dx$

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

6. $\int \frac{dx}{x\sqrt{9+4x^2}}$ (Hint: $\int \csc \theta d\theta = -\ln |\csc \theta + \cot \theta| + C$.)

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

8. $\int \frac{2x^3 + 3}{(x^2 + 1)^3} dx$

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

10. $\int (\ln x)^2 dx$

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

12. $\int \frac{dx}{(x^2 - 1)^2}$

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

14. $\int \frac{dx}{x \ln x ((\ln x) - 1)}$

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