Table of indefinite integrals

1. $\int a\,dx = ax + C$, a is a constant

2. $\int x\,dx = \dfrac{x^2}{2} + C$

3. $\int x^n\,dx = \dfrac{x^{n+1}}{n+1} + C, n \neq -1$

4. $\int \dfrac{dx}{x} = \ln|x| + C$

5. $\int e^x\,dx = e^x + C$

6. $\int a^x\,dx = \dfrac{a^x}{\ln a} + C$

7. $\int \sin x\,dx = -\cos x + C$

8. $\int \cos x\,dx = \sin x + C$

9. $\int \tan x\,dx = -\ln|\cos x| + C = \ln|\sec x| + C$

10. $\int \cot x\,dx = \ln|\sin x| + C = -\ln|\csc x| + C$

11. $\int \sec^2 x\,dx = \tan x + C$

12. $\int \csc^2 x\,dx = -\cot x + C$

13. $\int \sec x \tan x\,dx = \sec x + C$

14. $\int \csc x \cot x\,dx = -\csc x + C$

15. $\int \dfrac{dx}{\sqrt{a^2 - x^2}} = \arcsin \dfrac{x}{a} + C$

16. $\int \dfrac{dx}{\sqrt{x^2 + a}} = \ln|x + \sqrt{x^2 + a}| + C$

17. $\int \dfrac{dx}{x^2 + a^2} = \dfrac{1}{a} \arctan \dfrac{x}{a} + C$

18. $\int \dfrac{dx}{x^2 - a^2} = \dfrac{1}{2a} \ln\left|\dfrac{x - a}{x + a}\right| + C$

19. $\int \sec x\,dx = \ln|\sec x + \tan x| + C$

20. $\int \csc x\,dx = \ln|\csc x - \cot x| + C$