Temel İntegral Formülleri

1. $\int x^n \, dx = \frac{x^{n+1}}{n+1} + c \quad (n \neq -1)$

2. $\int \frac{dx}{x} = \boldsymbol{ln}\ x + c$ **; Genel Formu:** $\int \frac{\boldsymbol{f'(x).dx}}{\boldsymbol{f(x)}} = \boldsymbol{ln|f(x)| + c}$

3. $\int \boldsymbol{a^x}\ \boldsymbol{dx} = \frac{\boldsymbol{a^x}}{\boldsymbol{ln\, a}} + \boldsymbol{c}, \boldsymbol{a \neq 1}$**; Özel Hali:** $\int e^x . dx = e^x + c$

4. $\int \boldsymbol{cos}\ x\ dx = \boldsymbol{sin}\, x + c$

5. $\int \boldsymbol{sin}\ x\ \ dx = -\boldsymbol{cos}\ x + c$

6. $\int sec^2\, x\, dx = tan\ x + c$; $\int \frac{1}{cos^2\, x}\ dx = tan\ x + c$;

7. $\int \text{cosec}^2 x dx = -\,cot\ x + c$; $\int \frac{1}{sin^2\, x}\ dx = -\,cot\ x + c$;

8. $\int \boldsymbol{sec}\ x \cdot \tan x\ dx = \boldsymbol{sec}\ x + c$

9. $\int \text{cosec} x \cdot \boldsymbol{cot}\ x\ dx = -\text{cosec} x + c$

10. $\int \tan x\ dx = -\,\boldsymbol{ln\ cos}\ x + c$

11. $\int \cot x\ dx = \boldsymbol{ln\ sin}\ x + c$

12. $\int \frac{dx}{x^2+a^2} = \frac{1}{a} \arctan \frac{x}{a} + c$

13. $\int \frac{dx}{\sqrt{a^2-x^2}} = \arcsin \frac{x}{a} + c$

14. $\int \frac{dx}{\sqrt{x^2+a^2}} = \boldsymbol{ln}\left(x + \sqrt{x^2 + a^2}\right) + c$

15. $\int \frac{dx}{\sqrt{x^2-a^2}} = \boldsymbol{ln}\left(x + \sqrt{x^2 - a^2}\right) + c$

16. $\int \boldsymbol{cosh}\, x\, .\, dx = \boldsymbol{sinh}\, x + c$

17. $\int \boldsymbol{sinh}\, x\, .\, dx = \boldsymbol{cosh}\, x + c$