

EULER FORMÜLLERİ

1. $e^{a+bi} = e^a (\cos b + i \sin b)$, a, b -reel sayılar, $i = \sqrt{-1}$
2. $e^{a-bi} = e^a (\cos b - i \sin b)$

MOIVRE FORMÜLÜ

1. $(\cos \alpha + i \sin \alpha)^n = \cos n\alpha + i \sin n\alpha$

HİPERBOLİK FONKSİYONLAR

1. $\sinh t = \frac{1}{2} (e^t - e^{-t})$
2. $\cosh t = \frac{1}{2} (e^t + e^{-t})$
3. $\tanh t = \frac{\sinh t}{\cosh t} = \frac{e^t - e^{-t}}{e^t + e^{-t}}$
4. $\coth t = \frac{\cosh t}{\sinh t} = \frac{e^t + e^{-t}}{e^t - e^{-t}}$
5. $\sinh^{-1} t = \ln (t + \sqrt{t^2 + 1})$
6. $\cosh^{-1} t = \ln (t + \sqrt{t^2 - 1})$, $t \geq 1$
7. $\tanh^{-1} t = \frac{1}{2} \ln \frac{1+t}{1-t}$, $-1 < t < 1$
8. $\cosh^2 t - \sinh^2 t = 1$
9. $\sinh (t \pm x) = \sinh t \cosh x \pm \cosh t \sinh x$
10. $\cosh (t \pm x) = \cosh t \cosh x \pm \sinh t \sinh x$
11. $\sinh 2t = 2 \sinh t \cosh t$
12. $\cosh 2t = \cosh^2 t + \sinh^2 t$

İNTEGRALLER

1. $\int u dv = uv - \int v du$
2. $\int a^u du = \frac{a^u}{\ln a} + C$
3. $\int \cos u du = \sin u + C$
4. $\int \sin u du = -\cos u + C$
5. $\int \sec^2 u du = \tan u + C$
6. $\int \csc^2 u du = -\cot u + C$
7. $\int u^a du = \frac{u^{a+1}}{a+1} + C$
8. $\int \frac{du}{u} = \ln |u| + C$
9. $\int f(u) du = \int f(u) du$
10. $\int \frac{du}{a^2 + u^2} = \frac{1}{a} \arctan \frac{u}{a} + C$
11. $\int \frac{du}{u^2 - a^2} = \frac{1}{2a} \ln \left| \frac{u-a}{u+a} \right| + C$
12. $\int \frac{du}{\sqrt{a^2 + u^2}} = \arcsin \frac{u}{a} + C$
13. $\int \frac{du}{\sqrt{a^2 - u^2}} = \arcsin \frac{u}{a} + C$
14. $\int \sqrt{a^2 - u^2} du = \frac{u}{2} \sqrt{a^2 - u^2} + \frac{a^2}{2} \arcsin \frac{u}{a} + C$