

1.  $\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1} + C, (\alpha \neq -1),$
2.  $\int \frac{dx}{x} = \ln |x| + C, (x \neq 0),$
3.  $\int \frac{dx}{1+x^2} = \operatorname{arctg} x + C,$
4.  $\int \frac{dx}{\sqrt{1-x^2}} = \arcsin x + C, (-\arccos x + C), (|x| < 1),$
5.  $\int a^x dx = \frac{a^x}{\ln a} + C, (0 < a \neq 1); \int e^x dx = e^x + C,$
6.  $\int \sin x dx = -\cos x + C,$
7.  $\int \cos x dx = \sin x + C,$
8.  $\int \frac{dx}{\cos^2 x} = \operatorname{tg} x + C (x \neq \pi/2 + \pi n),$
9.  $\int \frac{dx}{\sin^2 x} = -\operatorname{ctg} x + C (x \neq \pi n),$
10.  $\int \frac{dx}{x^2-a^2} = 1/(2a) \ln \left| \frac{x-a}{x+a} \right| + C, (|x| \neq a),$
11.  $\int \frac{dx}{\sqrt{x^2 \pm a^2}} = \ln |x + \sqrt{x^2 \pm a^2}| + C, (|x| > a),$