Integration

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

$$\int \frac{dx}{x} = \log|x|$$

$$\int e^x dx = e^x$$

$$\int \frac{dx}{\cos^2 x} = \tan x$$

$$\int (\tan x) dx = -\log|\cos x|$$

$$\int \frac{dx}{\sqrt{1-x^2}} = \arcsin x$$

$$\int \frac{dx}{1+x^2} = \arctan x$$

$$\int \frac{dx}{\sqrt{1+x^2}} = \log\left|x+\sqrt{1+x^2}\right|$$

$$\int \frac{dx}{x^2-1} = \frac{1}{2}\log\left|\frac{x-1}{x+1}\right|$$

$$\int (\log x) dx = x\log x - x$$

$$\int (\cosh x) dx = \sinh x$$

$$\int (\sinh x) dx = \cosh x$$

$$\int \frac{dx}{\cosh^2 x} = \tanh x$$

$$\int \frac{dx}{\sqrt{x^2-1}} = \operatorname{ar}\cosh x$$

$$\int \frac{dx}{\sqrt{x^2+1}} = \operatorname{ar}\sinh x$$

$$\int \frac{dx}{1-x^2} = \operatorname{ar}\tanh x$$