$$\int e^{ax}\,dx = \frac{1}{a}e^{x} + c$$

$$\int \mathrm{a}^{\mathrm{x}}\,\mathrm{dx} = \frac{e^{x}}{ln\ a} + c$$

$$\int sin^{n}\,ax\,dx = -\frac{sin^{n-1}ax.\cos ax}{na} + \frac{n-1}{n}\int sin^{n-2}ax\,dx$$

$$\int cos^{n}\,ax\,dx = \frac{cos^{n-1}ax.\sin ax}{na} + \frac{n-1}{n}\int cos^{n-2}ax\,dx$$

$$\int \frac{dx}{sin^{2}x} = -\cot x + c$$

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

$$\int x^{n}.\sin ax\,dx = -\frac{x^{n}}{a}\cos ax + \frac{n}{a}\int x^{n-1}\cos ax\,dx$$

$$\int x.\sin ax\,dx = \frac{\sin ax}{a^{2}} - \frac{\cos ax}{a} + c$$

$$\int \frac{\sin ax}{x}dx = ax - \frac{(ax)^{3}}{3*3!} + \frac{(ax)^{5}}{5*5!} + ...$$

$$\int \frac{\sin ax}{x^{n}}dx = -\frac{1}{n-1}\frac{\sin ax}{x^{n-1}} + \frac{a}{n-1}\int \frac{\cos ax}{x^{n-1}}dx$$

$$\int \frac{dx}{\sin ax} = \frac{1}{a}\ln\left|\tan\frac{ax}{2}\right| + c$$

$$\int \frac{dx}{1 \pm \sin ax} = \frac{1}{a}\tan\left(\frac{ax}{2} \pm \frac{\pi}{4}\right)$$

$$\int x^{n}\cos ax\,dx = \frac{x^{n}.\sin ax}{a} + \frac{n}{a}\int x^{n-1}.\sin ax$$

$$\int x.\cos ax\,dx = \frac{\cos ax}{a^{2}} + \frac{\sin ax}{a} + c$$

$$\int \frac{\cos ax}{x}dx = \ln|ax| - \frac{(ax)^{3}}{2*2!} + \frac{(ax)^{5}}{4*4!} - ...$$

$$\int \frac{\cos ax}{x^{n}}dx = -\frac{1}{n-1}\frac{\cos ax}{x^{n-1}} - \frac{a}{n-1}\int \frac{\sin ax}{x^{n-1}}dx$$

$$\int \frac{dx}{1+\cos ax} = \frac{1}{a}\tan\frac{ax}{2} + c$$

$$\int \frac{dx}{\cos ax} = \frac{1}{a}\ln\left|\tan\left(\frac{ax}{2}+\frac{\pi}{4}\right)\right| + c$$

$$\int \tan ax\, dx = -\frac{1}{a}\ln|\cos ax| + c$$

$$\int tan^n ax\, dx = \frac{1}{a(n-1)} tan^{n-1} ax - \int \tan^{n-2} ax\, dx$$

$$\int \frac{\tan^n ax\, dx}{\cos^2 ax} = \frac{1}{a(n+1)} . \tan^{n+1} ax + c$$

$$\int \frac{dx}{\tan ax \pm 1} = \pm\frac{\pi}{2} + \frac{1}{2a}\ln|\sin ax \pm \cos ax| + c$$

$$\int \frac{\tan ax\, dx}{\tan ax \pm 1} = \frac{\pi}{2} \pm \frac{1}{2a}\ln|\sin ax \pm \cos ax| + c$$

$$\int \cot ax\, dx = \frac{1}{a}\ln|\sin ax| + c$$

$$\int cot^n ax\, dx = \frac{1}{a(n-1)} cot^{n-1} ax - \int \cot^{n-2} ax\, dx$$

$$\int \frac{dx}{1 \pm \cot ax} = \int \frac{\tan ax\, dx}{\tan ax \pm 1} = \frac{\pi}{2} \pm \frac{1}{2a}\ln|\sin ax \pm \cos ax| + c$$

$$\int \frac{\cot^n ax\, dx}{\sin^2 ax} = -\frac{1}{a(n+1)} . \cot^{n+1} ax + c$$

$$\int x . e^{ax} dx = \frac{e^x}{a^2}(axx - 1) + c$$

$$\int x^2 . e^{ax} dx = e^{ax}\left(\frac{x^2}{a} - \frac{2x}{a^2} + \frac{2}{a^3}\right) + c$$

$$\int x^n . e^{ax} dx = \frac{1}{a}x^n e^{ax} - \frac{n}{a}\int x^{n-1} e^{ax} dx$$

$$\int \frac{e^{ax} dx}{x} = \ln|x| + \frac{ax}{1 * 1!} + \frac{(ax)^2}{2 * 2!} + . . .$$

$$\int e^{ax} \sin bx\, dx = \frac{e^x}{a^2+b^2}(a \sin bx - b \cos ax) + c$$

$$\int e^{ax}\cos bx\,dx = \frac{e^x}{a^2+b^2}(a\cos bx + b\sin ax) + c$$

$$\int e^{ax} sin^n x\,dx = \frac{e^{ax}.\,sin^{n-1}x}{a^2+n^2}(a\sin x - n\cos x) + \frac{n(n-1)}{a^2+n^2}\int e^{ax}.\,sin^{n-2}x\,dx$$

$$\int e^{ax} cos^n x\,dx = \frac{e^{ax}.\,cos^{n-1}x}{a^2+n^2}(a\cos x + n\sin x) + \frac{n(n-1)}{a^2+n^2}\int e^{ax}.\,cos^{n-2}x\,dx$$

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

$$\int x.\,arc\sin\frac{x}{a}dx = \left(\frac{x^2}{2}-\frac{a^2}{4}\right)arc\sin\frac{x}{a}dx + \frac{x}{4}\sqrt{a^2-x^2} + c$$

$$\int x^2.\,arc\sin\frac{x}{a}dx = \frac{x^3}{3}arcsin\frac{x}{a}dx + \frac{x^2+2a^2}{9}\sqrt{a^2-x^2} + c$$

$$\int arc\cos\frac{x}{a}dx = x.\,arc\cos\frac{x}{a} - \sqrt{a^2-x^2} + c$$

$$\int x.\,arc\cos\frac{x}{a}dx = \left(\frac{x^2}{2}-\frac{a^2}{4}\right)arc\cos\frac{x}{a}dx - \frac{x}{4}\sqrt{a^2-x^2} + c$$

$$\int x^2.\,arc\cos\frac{x}{a}dx = \frac{x^3}{3}arc\cos\frac{x}{a}dx - \frac{x^2+2a^2}{9}\sqrt{a^2-x^2} + c$$

$$\int arc\tan\frac{x}{a}dx = x.\,arc\tan\frac{x}{a} - \frac{a}{2}\ln(a^2+x^2) + c$$

$$\int x.\,arc\tan\frac{x}{a}dx = \frac{a^2+x^2}{2}arc\tan\frac{x}{a} - \frac{ax}{2} + c$$

$$\int x^2.\,arc\tan\frac{x}{a}dx = \frac{x^3}{3}arc\tan\frac{x}{a} - \frac{ax^2}{6} + \frac{a^3}{6}\ln(a^2+x^2) + c$$

$$\int arc\cot\frac{x}{a}dx = x.\,arc\cot\frac{x}{a} + \frac{a}{2}\ln(a^2+x^2) + c$$

$$\int x.\,arc\cot\frac{x}{a}dx = \frac{a^2+x^2}{2}arc\cot\frac{x}{a} + \frac{ax}{2} + c$$

$$\int x^2.\,arc\cot\frac{x}{a}dx = \frac{x^3}{3}arc\cot\frac{x}{a} + \frac{ax^2}{6} - \frac{a^3}{6}\ln(a^2+x^2) + c$$