$\int \cot^2 ax\,dx = \frac{-(\cot ax)}{a} - x + c$
$\int \cot^3 ax\,dx = \frac{-1}{2a}\cot^2 ax - \frac{1}{a}\ln \sin ax + c$
$\int \cot^n ax\,dx = \frac{-1}{(a(n-1))}\cot^{(n-1)} ax - \int \cot^{(n-2)} ax\,dx$

Integrals Containing $\sin^{-1}$ ***&*** $\cos^{-1}$ ***Function***

$\int \sin^{-1}\frac{x}{a}dx = x\sin^{-1}\frac{x}{a} + \sqrt{(a^2 - x^2)} + c$
$\int x\sin^{-1}\frac{x}{a}dx = [\frac{x^2}{2} - \frac{a^2}{4}]\sin^{-1}\frac{x}{a} + \frac{x}{4}\sqrt{(a^2 - x^2)} + c$
$\int x\,62\sin^{-1}\frac{x}{a}dx = \frac{x^3}{3}\sin^{-1}\frac{x}{a} + \frac{1}{9}(x^2 + 2a^2)\sqrt{(a^2 - x^2)} + c$
$\int \frac{(\sin^{-1}\frac{x}{a})}{x}dx = \frac{x}{a} + \frac{1}{2.3.3} * (\frac{x^3}{a^3}) + \frac{1.3}{2.4.5.5} * (\frac{x^5}{a^5}) + \frac{1.3.5}{2.4.6.7.7} * (\frac{x^7}{a^7}) + ... + c$
$\int \frac{(\sin^{-1}\frac{x}{a})}{x^2}dx = \frac{-1}{x}\sin^{-1}\frac{x}{a} - \frac{1}{a}\ln(\frac{(a + \sqrt{(a^2 - x^2)})}{x}) + c$
$\int x^3\sin^{-1}\frac{x}{a}dx = \frac{(8x^4 - 3a^4)}{32}\sin^{-1}\frac{x}{a} + \frac{(2x\,63 + 3x\,a^2)}{32}\sqrt{(a^2 - x^2)} + c$
$\int x^4\sin^{-1}\frac{x}{a}dx = \frac{(x^5)}{5}\sin^{-1}\frac{x}{a} + [\frac{(3x^4 + 4x^2a^2 + 8a^2)}{75}].\sqrt{(a^2 - x^2)} + c$
$\int x^n\sin^{-1}\frac{x}{a}dx = \frac{x^{(n+1)}}{(n+1)}\sin^{-1}\frac{x}{a} - \frac{1}{(n+1)}\int(\frac{x^{(n+1)}}{\sqrt{(a^2 - x^2)}})dx$
$\int \frac{1}{x^n}\sin^{-1}\frac{x}{a}dx = \frac{-(\sin^{-1}\frac{x}{a})}{((n-1)x^{(n-1)})} + \frac{1}{(n-1)}\int \frac{dx}{[(x^{(n-1)})\sqrt{(a^2 - x^2)}]}$