**Integrales formas basica**

1) $\int x^n dx = \frac{1}{n+1}x^{n+1}$
2) $\int \frac{1}{x}dx = \ln|x|$
3) $\int u\,dv = uv - \int v\,du$
4) $\int \frac{1}{ax+b}dx = \frac{1}{a}\ln|ax+b|$

**Integrales de funciones racionales**

5) $\int \frac{1}{(x+a)^2}dx = -\frac{1}{x+a}$
6) $\int (x+a)^n dx = \frac{(x+a)^{n+1}}{n+1}, n \neq -1$
7) $\int x(x+a)^n dx = \frac{(x+a)^{n+1}((n+1)x-a)}{(n+1)(n+2)}$
8) $\int \frac{1}{1+x^2}dx = \tan^{-1}x$
9) $\int \frac{1}{a^2+x^2}dx = \frac{1}{a}\tan^{-1}\frac{x}{a}$
10) $\int \frac{x}{a^2+x^2}dx = \frac{1}{2}\ln|a^2+x^2|$
11) $\int \frac{x^2}{a^2+x^2}dx = x - a\tan^{-1}\frac{x}{a}$
12) $\int \frac{x^3}{a^2+x^2}dx = \frac{1}{2}x^2 - \frac{1}{2}a^2\ln|a^2+x^2|$
13) $\int \frac{1}{ax^2+bx+c}dx = \frac{2}{\sqrt{4ac-b^2}}\tan^{-1}\frac{2ax+b}{\sqrt{4ac-b^2}}$
14) $\int \frac{1}{(x+a)(x+b)}dx = \frac{1}{b-a}\ln\frac{a+x}{b+x},\ a \neq b$
15) $\int \frac{x}{(x+a)^2}dx = \frac{a}{a+x} + \ln|a+x|$
16) $\int \frac{x}{ax^2+bx+c}dx = \frac{1}{2a}\ln|ax^2+bx+c| - \frac{b}{a\sqrt{4ac-b^2}}\tan^{-1}\frac{2ax+b}{\sqrt{4ac-b^2}}$

# Integrales con raíces

17) $\int \sqrt{x-a}\,dx = \frac{2}{3}(x-a)^{3/2}$
18) $\int \frac{1}{\sqrt{x\pm a}}dx = 2\sqrt{x\pm a}$
19) $\int \frac{1}{\sqrt{a-x}}dx = -2\sqrt{a-x}$
20) $\int x\sqrt{x-a}\,dx = \frac{2}{3}a(x-a)^{3/2} + \frac{2}{5}(x-a)^{5/2}$
21) $\int \sqrt{ax+b}\,dx = \left(\frac{2b}{3a} + \frac{2x}{3}\right)\sqrt{ax+b}$
22) $\int (ax+b)^{3/2}dx = \frac{2}{5a}(ax+b)^{5/2}$
23) $\int \frac{x}{\sqrt{x\pm a}}dx = \frac{2}{3}(x\mp 2a)\sqrt{x\pm a}$
24) $\int \sqrt{\frac{x}{a-x}}dx = -\sqrt{x(a-x)} - a\tan^{-1}\frac{\sqrt{x(a-x)}}{x-a}$
25) $\int \sqrt{\frac{x}{a+x}}dx = \sqrt{x(a+x)} - a\ln\left[\sqrt{x} + \sqrt{x+a}\right]$
26) $\int x\sqrt{ax+b}\,dx = \frac{2}{15a^2}(-2b^2+abx+3a^2x^2)\sqrt{ax+b}$
27) $\int \sqrt{x(ax+b)}\,dx = \frac{1}{4a^{3/2}}\left[(2ax+b)\sqrt{ax(ax+b)} - b^2\ln\left|a\sqrt{x} + \sqrt{a(ax+b)}\right|\right]$
28) $\int \sqrt{x^3(ax+b)}\,dx = \left[\frac{b}{12a} - \frac{b^2}{8a^2x} + \frac{x}{3}\right]\sqrt{x^3(ax+b)} + \frac{b^3}{8a^{5/2}}\ln\left|a\sqrt{x} + \sqrt{a(ax+b)}\right|$
29) $\int \sqrt{x^2\pm a^2}\,dx = \frac{1}{2}x\sqrt{x^2\pm a^2} \pm \frac{1}{2}a^2\ln\left|x + \sqrt{x^2\pm a^2}\right|$

30) $\int x\sqrt{x^2\pm a^2}\,dx = \frac{1}{3}\left(x^2\pm a^2\right)^{3/2}$
31) $\int \frac{1}{\sqrt{x^2\pm a^2}}dx = \ln\left|x + \sqrt{x^2\pm a^2}\right|$
32) $\int \frac{1}{\sqrt{a^2-x^2}}dx = \sin^{-1}\frac{x}{a}$
33) $\int \frac{x}{\sqrt{x^2\pm a^2}}dx = \sqrt{x^2\pm a^2}$
34) $\int \frac{x}{\sqrt{a^2-x^2}}dx = -\sqrt{a^2-x^2}$
35) $\int \frac{x^2}{\sqrt{x^2\pm a^2}}dx = \frac{1}{2}x\sqrt{x^2\pm a^2} \mp \frac{1}{2}a^2\ln\left|x + \sqrt{x^2\pm a^2}\right|$
36) $\int \sqrt{ax^2+bx+c}\,dx = \frac{b+2ax}{4a}\sqrt{ax^2+bx+c} + \frac{4ac-b^2}{8a^{3/2}}\ln\left|2ax+b+2\sqrt{a(ax^2+bx^+c)}\right|$