Leyes de logaritmos

1. $\log_a AB = \log_a A + \log_a B$
2. $\log_a \frac{A}{B} = \log_a A - \log_a B$
3. $\log_a B^n = n \log_a B$

Sustituciones trigonométricas

1. $\sqrt{a^2 - u^2}$, $u = a\,sen\,\theta$
2. $\sqrt{a^2 + u^2}$, $u = a \tan \theta$
3. $\sqrt{u^2 - a^2}$, $u = a \sec \theta$

Integración por partes

$$\int f'(x) g(x)\,dx = (fg)(x) - \int g'(x) f(x)\,dx$$

Derivadas

1. $[(f \pm g)(x)]' = f'(x) \pm g'(x)$
2. $[(fg)(x)]' = f'(x)\,g(x) + g'(x)\,f(x)$
3. $\left[\left(\frac{f}{g}\right)(x)\right]' = \frac{f'(x)\,g(x) - g'(x)\,f(x)}{[g(x)]^2}$
4. $[(fog)(x)]' = [(f'og)(x)](g'(x))$
5. $[u^n]' = n u^{n-1} u'$
6. $[\ln u]' = \frac{1}{u} u'$
7. $[e^u]' = e^u u'$
8. $[sen u]' = \cos u\, u'$
9. $[\cos u]' = -sen u\, u'$
10. $[\tan u]' = \sec^2 u\, u'$
11. $[\cot u]' = -\csc^2 u\, u'$
12. $[\sec u]' = \sec u \tan u\, u'$
13. $[\csc u]' = -\csc u \cot u\, u'$
14. $[arcsen u]' = \frac{1}{\sqrt{1 - u^2}} u'$
15. $[\arccos u]' = \frac{-1}{\sqrt{1 - u^2}} u'$
16. $[\arctan u]' = \frac{1}{1 + u^2} u'$
17. $[arc\cot u]' = \frac{-1}{1 + u^2} u'$
18. $[arc\sec u]' = \frac{1}{|u|\sqrt{u^2 - 1}} u'$
19. $[arc\csc u]' = \frac{-1}{|u|\sqrt{u^2 - 1}} u'$

4a. $f(x) = g(h(x))$

$f'(x) = g'(h(x))\, h'(x)$

6a. $f(x) = \log_a u$

$f'(x) = \frac{u'}{u} \left(\frac{1}{\ln a}\right)$

7a. $f(x) = a^u$

$f'(x) = u' a^u \ln a$

Integrales

1. $\int k\,dx = kx + c, k \in \mathrm{R}$
2. $\int (f \pm g)(x)\,dx = \int f(x)\,dx \pm \int g(x)\,dx$
3. $\int kf(x)\,dx = k \int f(x)\,dx, k \in \mathrm{R}$
4. $\int x^n dx = \frac{x^{n+1}}{n+1} + c, n \neq -1$
5. $\int \frac{dx}{x} = \ln|x| + c$
6. $\int e^x dx = e^x + c$
7. $\int sen x\,dx = -\cos x + c$
8. $\int \cos x\,dx = sen x + c$
9. $\int \tan x\,dx = \ln|\sec x| + c$
10. $\int \cot x\,dx = \ln|sen x| + c$
11. $\int \sec x\,dx = \ln|\sec x + \tan x| + c$
12. $\int \csc x\,dx = \ln|\csc x - \cot x| + c$
13. $\int \sec^2 x\,dx = \tan x + c$
14. $\int \csc^2 x\,dx = -\cot x + c$
15. $\int \sec x \tan x\,dx = \sec x + c$
16. $\int \csc x \cot x\,dx = -\csc x + c$
17. $\int \frac{dx}{\sqrt{a^2 - x^2}} = arcsen \frac{x}{a} + c$
18. $\int \frac{dx}{a^2 + x^2} = \frac{1}{a} \arctan \frac{x}{a} + c$
19. $\int \frac{dx}{x\sqrt{x^2 - a^2}} = \frac{1}{a} arc\sec \frac{x}{a} + c$