Reglas de derivación

<table>
<thead>
<tr>
<th>Suma</th>
<th>y = u + v</th>
<th>y' = u' + v'</th>
<th>Producto</th>
<th>y = u v</th>
<th>y' = u' v + v' u</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resta</td>
<td>y = u - v</td>
<td>y' = u' - v'</td>
<td>Cociente</td>
<td>y = \frac{u}{v}</td>
<td>y' = \frac{u'v - v'u}{v^2}</td>
</tr>
</tbody>
</table>

| y = k        | y' = 0    |           | y = u        | y' = u'      |
| y = x        | y' = 1    |           | y = k x      | y' = k u      |
| y = \frac{1}{x} | y' = -\frac{1}{x^2} |           | y = \frac{1}{u} | y' = -\frac{u'}{u^2} |
| y = x^2      | y' = 2x   |           | y = u^2      | y' = 2u u'    |
| y = x^n      | y' = n x^{n-1} |           | y = u^n      | y' = n u^{n-1} u' |
| y = e^x      | y' = e^x  |           | y = e^u      | y' = u' e^u  |
| y = a^x      | y' = a^x \ln a |           | y = a^u      | y' = u' a^u \ln a |
| y = \ln x    | y' = \frac{1}{x} |           | y = \ln u    | y' = \frac{u'}{u} |
| y = \log_a x | y' = \frac{1}{x \ln a} |           | y = \log_a u | y' = \frac{u'}{u \ln a} |
| y = \sqrt{x} | y' = \frac{1}{2 \sqrt{x}} |           | y = \sqrt{u} | y' = \frac{u'}{2 \sqrt{u}} |
| y = \sin x   | y' = \cos x |           | y = \sin u   | y' = u' \cos u |
| y = \cos x   | y' = -\sin x |           | y = \cos u   | y' = -u' \sin u |
| y = \tan x   | \begin{cases} y' = 1 + \tan^2 x \\ = \frac{1}{\cos^2 x} = \sec^2 x \end{cases} |           | y = \tan u   | \begin{cases} y' = (1 + \tan^2 u) u' \\ = \frac{u'}{\cos^2 u} = u' \sec^2 u \end{cases} |
| y = \cot x   | y' = -\frac{1}{\sec^2 x} = -\cosec^2 x |           | y = \cot u   | y' = -\frac{u'}{\sec^2 u} = -u' \cosec^2 u |
| y = \arcsen x| y' = \frac{1}{\sqrt{1-x^2}} |           | y = \arcsen u| y' = \frac{u'}{\sqrt{1-u^2}} |
| y = \arccos x| y' = -\frac{1}{\sqrt{1-x^2}} |           | y = \arccos u| y' = -\frac{u'}{\sqrt{1-u^2}} |
| y = \arctan x| y' = \frac{1}{1+x^2} |           | y = \arctan u| y' = \frac{u'}{1+u^2} |

Derivación logarítmica

1) y = u^v 
2) \ln y = \ln(u^v) 
3) \ln y = v \ln u 
4) \frac{y'}{y} = v' \ln u + v \frac{u'}{u} 
5) y'' = y \left( v' \ln u + v \frac{u'}{u} \right) 
6) y'' = u' \left( v' \ln u + v \frac{u'}{u} \right) 

Siendo: y, u, v funciones de x; a, k, n constantes.