Reglas de derivación algebraica

1. $\frac{d}{dx}(cu) = c\frac{du}{dx}$
2. $\frac{d}{dx}(u^n) = n\,u^{n-1}\frac{du}{dx}$
3. $\frac{d}{dx}(u \cdot v) = u\frac{dv}{dx} + v\frac{du}{dx}$
4. $\frac{d}{dx}\left(\frac{u}{v}\right) = \frac{v\frac{du}{dx} - u\frac{dv}{dx}}{v^2}$
5. $\frac{d}{dx}\left(\sqrt{u}\right) = \frac{1}{2\sqrt{u}}\frac{du}{dx}$

Reglas de derivación exponenciales y logarítmicas

1. $\frac{d}{dx}(a^u) = a^u \ln a \frac{du}{dx}$
3. $\frac{d}{dx}(u^v) = v\,u^{v-1}\frac{du}{dx} + u^v \ln u \frac{dv}{dx}$
4. $\frac{d}{dx}(\ln u) = \frac{1}{u}\frac{du}{dx}\ con\ u > 0$
5. $\frac{d}{dx}(\log_a u) = \frac{1}{u \ln a}\frac{du}{dx}$

Reglas de derivación de funciones trigonométricas directas e inversas

$D_x sen\, u = \cos u\ D_x u$
$D_x \cos u = -sen\, u\, D_x u$
$D_x \tan u = \sec^2 u\ D_x u$
$D_x \cot u = -\csc^2 u\ D_x u$
$D_x \sec u = \sec u \tan u\ D_x u$
$D_x \csc u = -\csc u \cot u\ D_x u$
$D_x ang\ sen\, u = \frac{D_x u}{\sqrt{1-u^2}}$
$D_x ang\ cos\, u = \frac{-D_x u}{\sqrt{1-u^2}}$
$D_x ang\ tan\, u = \frac{D_x u}{u^2+1}$
$D_x ang\ cot\, u = \frac{-D_x u}{u^2+1}$
$D_x ang\ sec\, u = \frac{D_x u}{u\sqrt{u^2-1}}$
$D_x ang\ csc\, u = \frac{-D_x u}{u\sqrt{u^2-1}}$

Reglas de derivación de funciones trigonométricas hiperbólicas directas e inversas

$D_x senh\, u = \cosh u\ D_x u$
$D_x \cosh u = senh\, u\, D_x u$

$D_x \tanh u = \operatorname{sech}^2 u \ D_x u$
$D_x \coth u = -\operatorname{csch}^2 u \ D_x u$
$D_x \operatorname{sech} u = -\operatorname{sech} u \tanh u \ D_x u$
$D_x \operatorname{csch} u = -\operatorname{csch} u \coth u \ D_x u$
$D_x ang\ senh\ u = \dfrac{D_x u}{\sqrt{u^2+1}}$
$D_x ang\ cosh\ u = \dfrac{D_x u}{\sqrt{u^2-1}}\ ; u > 1$
$D_x ang\ tanh\ u = \dfrac{D_x u}{1-u^2}\ ;\ -1 < u < 1$
$D_x ang\ coth\ u = \dfrac{D_x u}{1-u^2}\ ;\ -1 > u > 1$
$D_x ang\ sech\ u = \dfrac{-D_x u}{u\sqrt{1-u^2}}\ ;\ 0 < u < 1$
$D_x ang\ csch\ u = \dfrac{-D_x u}{|u|\sqrt{u^2+1}}\ ; u \neq 0$

$\dfrac{dy}{dx} = \dfrac{\frac{dy}{dt}}{\frac{dx}{dt}}$ *y que* $\dfrac{d^2y}{dx^2} = \dfrac{\frac{d}{dt}\left(\frac{dy}{dx}\right)}{\frac{dx}{dt}}$

$$\theta = ang \tan\left(\frac{m_2 - m_1}{1 + m_2 m_1}\right)$$