Derivative formulas

Y = cte	Y’ = 0
Y = x^m	Y’ = mx^{m-1}
Y = kx^m	Y’ = k mx^{m-1}
Y = $\frac{1}{x}$	Y’ = - $\frac{1}{x^2}$
Y = $\sqrt{x}$	Y’ = $\frac{1}{2\sqrt{x}}$
Y = sinx	Y’ = cosx
Y = sinax	Y’ = acosax
Y = cosx	Y’ = -sinx
Y = cosax	Y’ = -asinax
Y = tanx	Y’ = sec^2x
Y = tanax	Y’ = a$sec^2 ax$
Y = cotx	Y’ = - $csc^2 x$
Y = cotax	Y’ = -$acsc^2$ax
Y = sec x	Y’ = secx.tanx
Y = secax	Y’ = a.sec(ax).tan(ax)
Y = cscx	Y’ = -cscx.cotx
Y = cscax	Y’ = -a.csc(ax).cot(ax)

Rules of derivative

Y = u + v / Y = u - v	Y’ = u’ + v’ / Y’ = u’ – v’
Y = u.v	Y’ = u’v + v’u
Y = $\frac{u}{v}$	Y’ = $\frac{u'v-v'u}{v^2}$

Chain rule

Y = f(u(x))	Y’ = f’(u(x)).u’(x)