$y = k \cdot f \quad y' = k \cdot f'$
$y = f + g \quad y' = f' + g'$
$y = f \cdot g \quad y' = f' g + f \cdot g'$
$(f \pm g)' = f' \pm g'$

$$\left(\frac{f}{g}\right)' = \frac{f' g - f \cdot g'}{g^2}$$

$y = f(g) \quad y' = f'(g) \cdot g' \qquad (a^x)' = a^x \cdot \ln a$

$(\tan x)' = \dfrac{1}{\cos^2 x} \qquad (cotan\, x)' = -\dfrac{1}{\sin^2 x}$

$(e^x)' = e^x \qquad (\ln x)' = x^{-1}$

$(a \sin x)' = \dfrac{1}{\sqrt{1 - x^2}} \qquad (a \cos x)' = -\dfrac{1}{\sqrt{1 - x^2}}$

$(a \tan x)' = \dfrac{1}{1 + x^2} \qquad (\log_a x)' = \dfrac{1}{x \cdot \ln a}$

max: $y' = 0 \quad y'' < 0 \qquad$ min: $y' = 0 \quad y'' > 0$
sedlo: $y' = 0 \quad y'' = 0 \qquad$ prevoj: $y' \neq 0 \quad y'' = 0$

$$\int \left(f(x) \pm g(x) \right) \cdot dx = \int f(x) \pm \int g(x)$$

$$\int k \cdot f(x) \cdot dx = k \cdot \int f(x) \cdot dx$$

$$\int \sin x \cdot dx = -\cos x + c$$

$$\int \cos x \cdot dx = \sin x + c$$

$$\int \frac{dx}{1 + x^2} = a \tan x + c$$

$$\int \frac{dx}{\sqrt{1 - x^2}} = a \sin x + c$$

$$\int e^x \cdot dx = e^x + c$$

$$\int \frac{dx}{x} = \ln|x| + c$$

$$\int \frac{f'(x) \cdot dx}{f(x)} = \ln|f(x)| + c$$

$$\int \frac{dx}{\sqrt{x^2 + k}} = \ln\left|x + \sqrt{x^2 + k}\right| + c$$

$$\int x^n \cdot dx = \frac{x^{n+1}}{n+1} + c$$

$$\int \frac{dx}{\sqrt{a^2 - x^2}} = a \sin\left(\frac{x}{a}\right)^2 + c$$

$$\int \frac{dx}{a^2 + x^2} = \frac{1}{a} \cdot a \tan \frac{x}{a} + c$$

$$\int \frac{dx}{\cos^2 x} = \tan x + c$$

$$\int \frac{dx}{\sin^2 x} = -\cot an\, x + c$$

$$\int dv \cdot u = u \cdot v - \int (du \cdot v)$$