Exemplos

$f = K \cdot f$

$f(x) = K \cdot f(x)$

$f'(x) = K \cdot f'(x)$

- $f(x,y) = \underbrace{x^2 \cdot \cos y}_{K}$

$f'_x = \cos y\,(2x) = 2x\cos y$

$f'_y = x^2 \cdot (-\operatorname{sen} y) = -x^2 \operatorname{sen} y$

$f(x) = f(x) + K$

$f'(x) = f'(x) + \underbrace{(K)'}_{0}$

$f'(x) = f'(x)$

- $f(x,y) = x^2 + \cos y$

$f'_x = 2x \;;\; f'_y = \underbrace{(x^2)'}_{0} + (\cos y)' = (\cos y)' = -\operatorname{sen} y$

$f(x) = \log x \cdot 5 = \underbrace{5}\,\underbrace{\log x}$ $\qquad f = K \cdot f$

$f'(x) = 5\,(\log x)' = 5 \cdot \frac{1}{x} = \frac{5}{x}$ $\qquad f' = K \cdot f'$

$f(x) = \log x + 5$ $\qquad f = f + k$

$f'(x) = \frac{1}{x} + \underbrace{(5)'}_{0} = \frac{1}{x}$ $\qquad f' = f'$

$$f(x,y) = 10 \underbrace{x^{1/2}}\underbrace{y^{1/2}}$$

$$f'_x = \overset{5}{\cancel{10}} \cancel{\left(\tfrac{1}{2}\right)} x^{\frac{1}{2}-1} \cdot y^{1/2} = 5x^{-\frac{1}{2}} y^{\frac{1}{2}} = 5\frac{\sqrt{y}}{\sqrt{x}}$$

$$f'_y = \overset{5}{\cancel{10}} x^{1/2} \cdot \cancel{\tfrac{1}{2}} y^{-\frac{1}{2}} = 5x^{1/2} y^{-\frac{1}{2}} = 5\frac{\sqrt{x}}{\sqrt{y}}$$