

1 Total derivate

$$\cos'(x) = \frac{d \cos}{dx}(x)$$

$$f'(x) = \frac{df}{dx}(x)$$

$$H^{(5)}(x) = \frac{d^5 H}{dx^5}(x)$$

$$G^{(n)}(x) = \frac{d^n G}{dx^n}(x)$$

$$f'''(x) = \frac{d^3 f}{dx^3}(x)$$

$$\cos'''(x) = \frac{d^3 \cos}{dx^3}(x)$$

2 Partial derivate

$$\cos'_x(x) = \frac{\partial \cos}{\partial x}(x)$$

$$f'_x(x) = \frac{\partial f}{\partial x}(x)$$

$$H'_x(x) = \frac{\partial H}{\partial x}(x)$$

$$f'_{x(r)y(s)}(x, y) = \frac{\partial^{r+s} f}{\partial x^r \partial y^s}(x, y)$$

$$f'_{x(5+2)y(4)z} = \frac{\partial^{13} f}{\partial x^{5+2} \partial y^4 \partial z}(x, y)$$

$$\partial_{f(5^2)h(4)r} G(x, y) = \frac{\partial^{30} G}{\partial f^{5^2} \partial h^4 \partial r}(x, y)$$

$$\text{Problème : } \partial_{x(n)\dots z(r)} F(x, \dots, y) = \frac{\partial^{N+\dots+r} F}{\partial x^n \partial \dots z^r}(x, \dots, y)$$