Let $f, g : A \subseteq \mathbb{R}^2 \to \mathbb{R}$ with A open and partially derivable in $(x, y) \in A$ then:

- ♢ $h = f + g$ is partially derivable and has $\frac{\partial h}{\partial x} = \frac{\partial f}{\partial x} + \frac{\partial g}{\partial x}$ and $\frac{\partial h}{\partial y} = \frac{\partial f}{\partial y} + \frac{\partial g}{\partial y}$ as partial derivatives.
- ♢ if $\alpha \in \mathbb{R}$ also $\alpha \cdot f$ is derivable with partial derivatives $\frac{\partial(\alpha \cdot f)}{\partial x} = \alpha \cdot \frac{\partial f}{\partial x}$ and $\frac{\partial(\alpha \cdot f)}{\partial y} = \alpha \cdot \frac{\partial f}{\partial y}$
- ♢ also $f \cdot g$ is derivable and $\frac{\partial(f \cdot g)}{\partial x} = \frac{\partial f}{\partial x} \cdot g + f \cdot \frac{\partial g}{\partial x}$ with $\frac{\partial(f \cdot g)}{\partial y} = \frac{\partial f}{\partial y} \cdot g + f \cdot \frac{\partial g}{\partial y}$
- ♢ aslo $\frac{f}{g}$ is derivable so: $\frac{\partial(\frac{f}{g})}{\partial x} = \frac{\partial}{}$