- $z = f(x - y)$
- $f : \Re \to \Re$
- QvQ $\frac{\partial z}{\partial x} + \frac{\partial z}{\partial y} = 0$

$z : \Re^2 \to \Re$
$g : \Re^2 \to \Re$
$z = (f \circ g)_{(x,y)} = f(g(x, y))$
$f = a, a \in \Re$

- $\frac{\partial z}{\partial x} = f'(x - y) \cdot \frac{\partial g}{\partial x} =$
  $f'(x - y) \cdot 1$
- $\frac{\partial z}{\partial y} = f'(x - y) \cdot \frac{\partial g}{\partial y} =$
  $f'(x - y) \cdot -1$

$\Rightarrow \frac{\partial z}{\partial x} + \frac{\partial z}{\partial y} = f'(x - y) \cdot 1 + f'(x - y) \cdot -1 =$
$f'(x - y) - f'(x - y) = 0 \qquad \blacksquare$