2nd onden partial derivative

$$2 = x^3 + 2xy$$

finst onden partial derivative

$$\frac{dz}{dx} = 3x^{2} + 2(1)y$$

$$= 3x^{2} + 2y$$

Mixed/coross od 1

$$\frac{\partial^2 z}{\partial y \partial x} = \frac{\partial}{\partial y} \left(\frac{\partial z}{\partial x} \right)$$
 $= \frac{\partial}{\partial y} \left(\frac{\partial x}{\partial x} \right) \left(\frac{\partial x}{\partial x} \right)$
 $= \frac{\partial}{\partial y} \left(\frac{\partial x}{\partial x} + \frac{\partial y}{\partial x} \right)$

$$= 0 + 2.1$$

= 2

$$\frac{\partial z}{\partial y} = 0 + 2\pi(1)$$

$$= 2\pi$$

$$2nd \circ ondoz!$$

$$\frac{\partial z}{\partial y} = 0$$

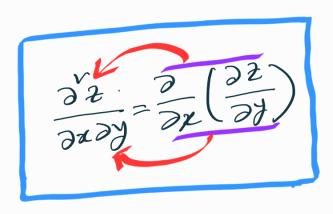
$$mixed:$$

$$\frac{\partial z}{\partial x \partial y} = \frac{\partial}{\partial x} \left(\frac{\partial z}{\partial y}\right)$$

$$= \frac{\partial}{\partial x} \left(\frac{\partial z}{\partial y}\right)$$

$$= \frac{\partial}{\partial x} \left(\frac{\partial z}{\partial y}\right)$$

$$= 0$$



1.
$$\frac{1}{3}$$
 constant ($\frac{1}{2}$ and $\frac{1}{3}$) = $\frac{1}{3}$ ($\frac{1$

$$\frac{\partial f}{\partial y^{\nu}} = \frac{\partial}{\partial t} \left(\frac{\partial}{\partial y} \left(x + y + x \right) \right)$$

$$= \frac{\partial}{\partial y} \left(0 + 1 + x \cdot 1 \right)$$

$$= \frac{\partial}{\partial y} \left(1 + x \right)$$

$$= 0 + 0$$

$$= \frac{3}{37} \left(\frac{3}{31} \left(\frac{2}{21} \right) \right) \right) \right)}{2} \right) \right) \right) \right) \right) \right) \right)$$

$$= 0+1$$

$$= \frac{\partial}{\partial x} \left(\frac{\partial}{\partial y} \left(x + y + xy \right) \right)$$