



$$\begin{cases} g + z = f \\ x \times y = g \end{cases} \quad \frac{\partial f}{\partial z} = 1 \quad \frac{\partial f}{\partial g} = 1$$

$$\frac{\partial g}{\partial x} = y = 2 \quad \frac{\partial g}{\partial y} = x = 1$$

$$\frac{\partial f}{\partial x} = \frac{\partial f}{\partial g} \times \frac{\partial g}{\partial x} = 1 \times 2 = 2$$

$$\frac{\partial f}{\partial y} = \frac{\partial f}{\partial g} \times \frac{\partial g}{\partial y} = 1 \times 1 = 1$$

$$\left( \frac{\partial f}{\partial x}, \frac{\partial f}{\partial y}, \frac{\partial f}{\partial z} \right) = (2, 1, 1)$$