

Reuse

$$(1) f(x, y) = \ln(x^2y + 2y)$$

$$\frac{\partial f}{\partial x} = \frac{1}{x^2y + 2y} \cdot 2xy \quad \text{et} \quad \frac{\partial f}{\partial y} = \frac{1}{x^2y + 2y} (x^2 + 2)$$

$$\frac{\partial f}{\partial x} = \frac{2xy}{x^2y + 2y}$$

$$\frac{\partial f}{\partial y} = \frac{x^2 + 2}{x^2y + 2y}$$

$$(2) f(x, y) = g(x^2y + 2y)$$

$$\frac{\partial f}{\partial x} = g'(x^2y + 2y) \cdot 2xy \quad \text{et} \quad \frac{\partial f}{\partial y} = g'(x^2y + 2y) \cdot (x^2 + 2)$$

$$(3) a(x, y) = g(f(x, y))$$

$$\frac{\partial a}{\partial x} = g'(f(x, y)) \frac{\partial f}{\partial x} \quad \text{et} \quad \frac{\partial a}{\partial y} = g'(f(x, y)) \cdot \frac{\partial f}{\partial y}$$