Exempel

Beräkna

$$f'_x = \frac{\partial f}{\partial x} \quad \text{och} \quad f'_y = \frac{\partial f}{\partial y}$$

då

$$f(x, y) = x \sin y + \mathrm{e}^{x^2 y}.$$

Bestäm även $f'_x(1, 0)$.

Lösning

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$$f'_x(1,0) = \sin 0 + \mathrm{e}^{1^2\cdot 0}\cdot(2\cdot 1\cdot 0)$$

Lösning

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$$f'_y = x\cos y + \mathrm{e}^{x^2 y} \cdot x^2,$$

$$f'_x(1,0) = \sin 0 + \mathrm{e}^{1^2 \cdot 0} \cdot (2 \cdot 1 \cdot 0) = 0.$$