

Řešení ú
11. sada

3.c) Pro $f(x, y) = x \sin(x + y)$ máme

$$\frac{\partial f}{\partial x} = \sin(x + y) + x \cos(x + y)$$

$$\frac{\partial f}{\partial y} = x \cos(x + y)$$

$$\frac{\partial^2 f}{\partial x^2} = 2 \cos(x + y) - x \sin(x + y)$$

$$\frac{\partial^2 f}{\partial x \partial y} = \frac{\partial^2 f}{\partial y \partial x} = \cos(x + y) - x \sin(x + y)$$

$$\frac{\partial^2 f}{\partial y^2} = -x \sin(x + y)$$