



$$f(x, y) = \frac{x^2}{9} + \frac{y^2}{4}$$

$$x_1 = 0.924130$$

$$y_1 = -0.730177$$

$$\nabla f(\cdot) = (0.205362, \\ -0.365088)$$

$$\alpha_1 = 2.308219$$

$$\sqrt{x_1^2 + y_1^2} = 1.177784$$