



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

$$x_1 = 3.111111$$

$$y_1 = 0.500000$$

$$\nabla f(\cdot) = (0.691358, \\ 0.250000)$$

$$\alpha_1 = 1$$

$$\sqrt{x_1^2 + y_1^2} = 3.151034$$