



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

$$x_9 = 0.000148$$

$$y_9 = -0.000117$$

$$\nabla f(\cdot) = (0.000033, \\ -0.000059)$$

$$\alpha_9 = 2.308219$$

$$\sqrt{x_9^2 + y_9^2} = 0.000189$$