



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

$$x_9 = 0.416639$$

$$y_9 = 0.001953$$

$$\nabla f(\cdot) = (0.092586, \\ 0.000977)$$

$$\alpha_9 = 1$$

$$\sqrt{x_9^2 + y_9^2} = 0.416643$$