



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

$$x_8 = 0.368101$$

$$y_8 = -0.013092$$

$$\nabla f(\cdot) = (0.081800, \\ -0.006546)$$

$$\alpha_8 = 3/9$$

$$\sqrt{x_8^2 + y_8^2} = 0.368334$$