



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

$$x_4 = 1.463801$$

$$y_4 = 0.062500$$

$$\nabla f(\cdot) = (0.325289, \\ 0.031250)$$

$$\alpha_4 = 1$$

$$\sqrt{x_4^2 + y_4^2} = 1.465135$$