



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

$$x_2 = 2.419753$$

$$y_2 = 0.250000$$

$$\nabla f(\cdot) = (0.537723, \\ 0.125000)$$

$$\alpha_2 = 1$$

$$\sqrt{x_2^2 + y_2^2} = 2.432633$$