

$$f'(x) = \lim_{\Delta x \rightarrow 0} \frac{f(x + \Delta x) - f(x)}{\Delta x}$$

$$f'(x) \quad f'_x(x) \quad f'_x \quad \boxed{f_x}$$

$$\frac{df(x)}{dx} \quad \frac{\partial f(x, y)}{\partial y} \quad f'_y(x, y) \quad \dot{f}(t) = f_t$$

2) Берем.

$$\nabla f(x, y) = \left[\frac{\partial f(x, y)}{\partial x} \quad \frac{\partial f(x, y)}{\partial y} \right]$$

$$\nabla \cdot \nabla f(x, y) = f_{xx} + f_{yy}$$

1) По формуле апп.

2) По формуле Тейлора

$$f_{xx} = \frac{f(x - \Delta x) - 2f(x) + f(x + \Delta x)}{\Delta x^2 \quad (?)}$$