



$$f(x) \approx f(a) + f'(a)(x-a)$$

$$f(x) = e^x, \quad a = 0$$

$$e^x \approx e^0 + e^0(x-0) = 1 + 1 \cdot x \approx x + 1$$

$$e^x \approx x + 1$$

ή εναλλακτικά

$$f(x_0 + \Delta x) \approx f(x_0) + f'(x_0)\Delta x$$

$$f(x) = e^x, \quad x_0 = 0, \quad \Delta x = x$$

$$e^{x_0 + \Delta x} = e^x \approx e^0 + e^0 x = 1 + x$$

$$e^x \approx x + 1$$