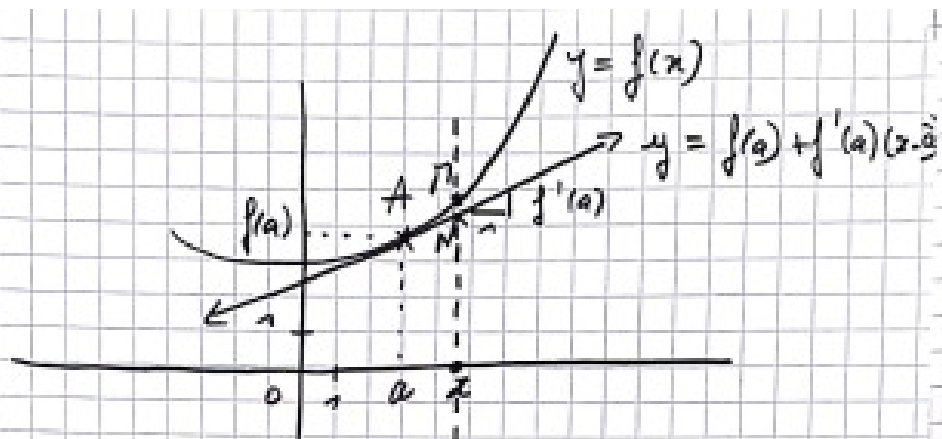




$$\boxed{x \approx a \Rightarrow x \sim a}$$

$$y \sim y'$$

$$\boxed{f(x) \sim f(a) + f'(a)(x-a)}$$

example

$$f(x) = x^2$$

$$f'(x) = 2x$$

$$f'(1) = 2 \times 1 = 2; f(1) = 1^2 = 1$$

$$x \approx 1 \Rightarrow f(x) \sim f(1) + f'(1)(x-1)$$

$$x^2 \sim 1 + 2(x-1)$$

$$x^2 \sim 2x - 1$$