

Zadatak 7. U kojoj točki je tangenta na parabolu $y = x^2 + 2$ paralelna s x -osi?

Rješenje. $y = x^2 + 2, k = 0;$

$$\begin{aligned} k &= \lim_{\Delta x \rightarrow 0} \frac{1}{\Delta x} [(x_0 + \Delta x)^2 + 2 - x_0^2 - 2] = \lim_{\Delta x \rightarrow 0} \frac{1}{\Delta x} (x_0^2 + 2x_0\Delta x + \Delta x^2 - x_0^2) \\ &= \lim_{\Delta x \rightarrow 0} (2x_0 + \Delta x) = 2x_0 \\ 2x_0 = 0 &\implies x_0 = 0, \quad y(x_0) = 2 \implies T(0, 2). \end{aligned}$$