

$$2.6 \quad x_{n+1} = x_n - \frac{f(x_n)}{f'(x_0)} = F(x)$$

Sprawdzamy czy $F(\alpha) = \alpha$

$$F(\alpha) = \alpha - \frac{f(\alpha)}{f'(x_0)} = \underline{\underline{\alpha}}$$

$$F'(x) = 1 - \frac{f'(x)}{f'(x_0)}$$

kwadratowa
↓
wbiegaj

$$F'(\alpha) = 0 \quad 1 - \frac{f'(\alpha)}{f'(x_0)} = 0 \Rightarrow f'(x_0) = f'(\alpha)$$

$$|F'(\alpha)| < 1 - \text{liniowa} \quad \left| 1 - \frac{f'(\alpha)}{f'(x_0)} \right| < 1$$

$$\underline{\underline{\frac{f'(\alpha)}{f'(x_0)} \in (0, 2)}}$$