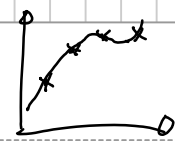


$f(x_i)$



Dod: x_1, x_2, \dots, x_N ishuki

$(x_i, y_i) \quad i=1, \dots, N$

$$L_k(x) = \prod_{\substack{j=1 \\ j \neq k}}^N \frac{x - x_j}{x_k - x_j}$$

$$P(x) = \sum_{k=1}^N y_k L_k(x)$$

$y = \text{lagrange}(x, K, t)$

$y = L_k(t)$

⚠ testare!

$y = \text{interpoloseno}(N, t)$

$[t_1, t_2, \dots, t_m]$

$[p(t_1) \quad p(t_2) \quad \dots \quad p(t_m)]$

plot(t, y)

$$1) \quad |f(x) - p(x)| \leq \frac{C}{N!} |x - x_1| \cdot |x - x_2| \cdot \dots \cdot |x - x_N| \quad C = \max_{x \in [a, b]} |f^{(N)}(x)|$$

$f(x) = \sin(x)$

$f^{(N)}(x) = \text{uno tra } \sin(x), \cos(x), -\sin(x), -\cos(x)$

$C = 1$

$|x - x_1| \leq \pi$

\vdots
 $|x - x_N| \leq \pi$

$$|f(x) - p(x)| \leq \frac{1}{N!} \pi^N \quad N=16$$

