Důkaz věty o konv. Newton. metody

$$g(x) = x - \frac{f(x)}{f'(x)}$$

$$g'(x) = 1 - \frac{f'(x)\cdot f'(x) - f(x)\, f''(x)}{(f'(x))^2} = + \frac{f(x)\cdot f''(x)}{(f'(x))^2}$$

$$g'(\xi) = \frac{f(\xi)\cdot f''(\xi)}{(f'(\xi))^2} = 0$$

3 5-15:55

$g'(\xi) = 0 \Rightarrow |g'(x)| \le L < 1$
na okolí ξ $O_1(\xi)$

$$g(x) - g(\xi) = g(x) - \xi = g'(\alpha)(x - \xi)$$

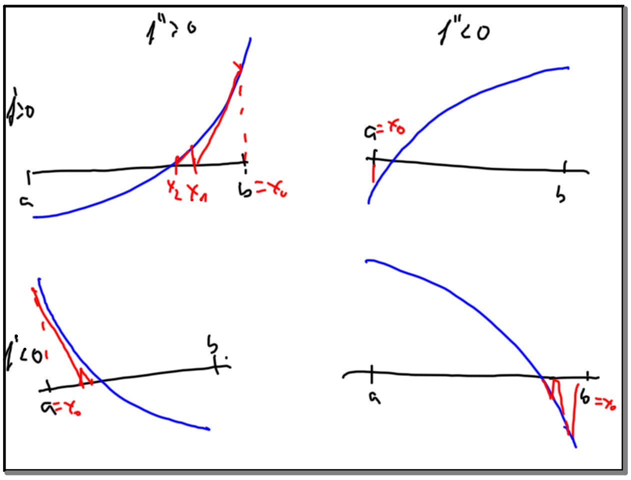
$|g(x) - \xi| \le M\,|x - \xi|$ $M = \max_{O_2(\xi)} |g'(x)|$, $M < 1$

Na $O_2(\xi)$ se bod $x \in O_2(\xi)$ zobrazí do $O_2(\xi)$

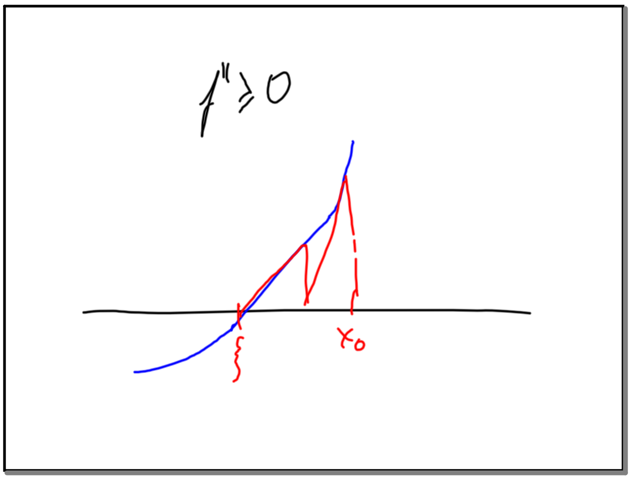
$\overline{O_1} \cap \overline{O_2} \cap [a,b] = I$

3 5-16:30

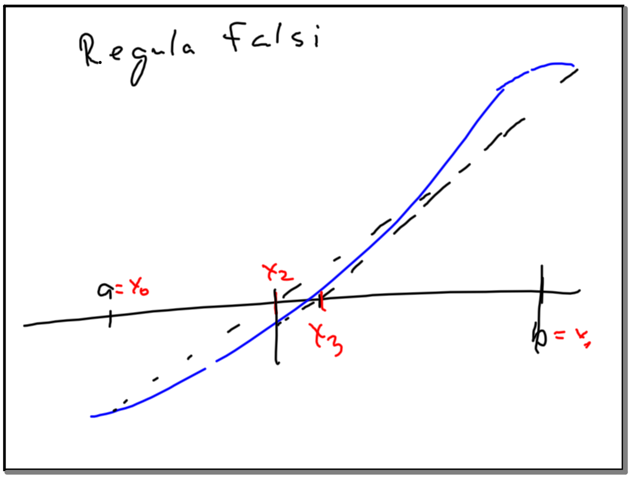
Fourierovy podmínky



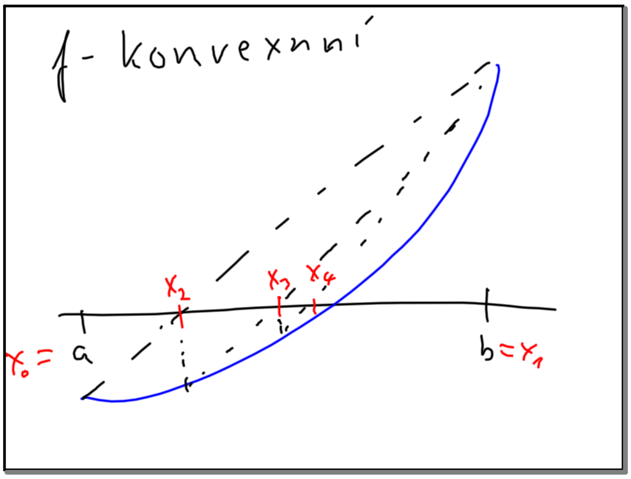
3 5-16:47



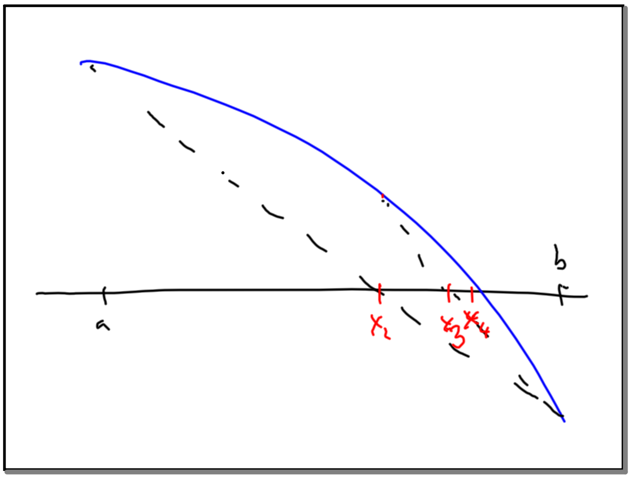
3 5-16:53



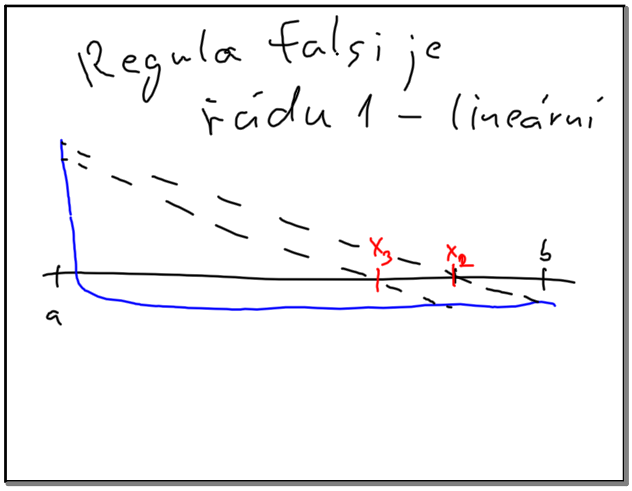
3 5-17:20



3 5-17:24



3 5-17:27



3 5-17:29