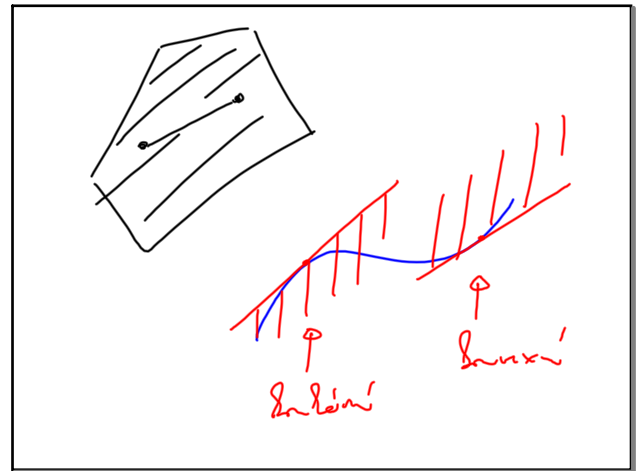
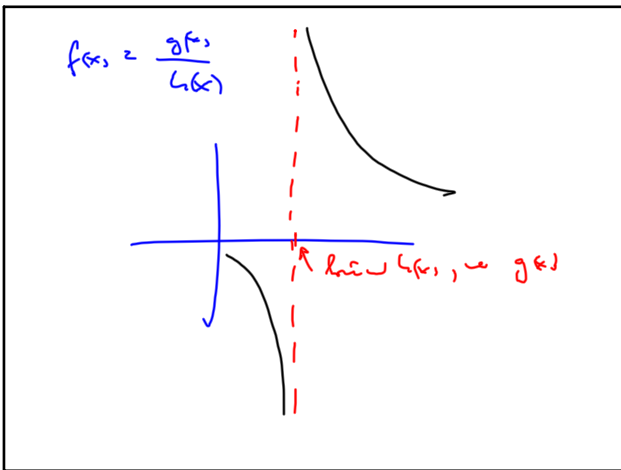


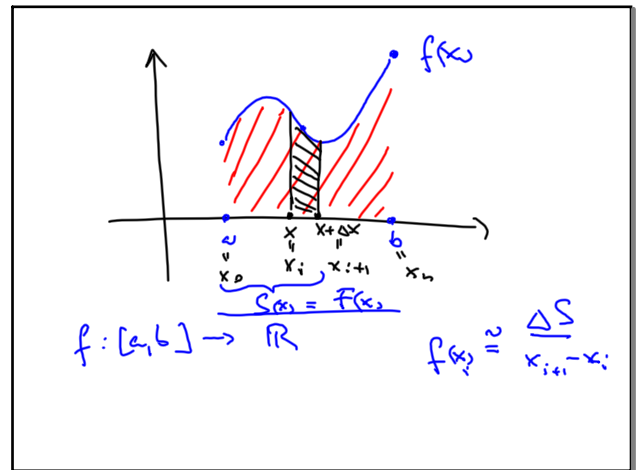
4 4-14:00



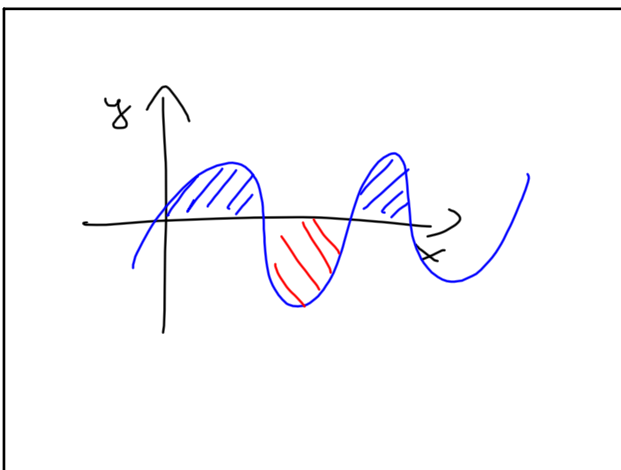
4 4-14:14



4 4-14:22



4 4-14:32



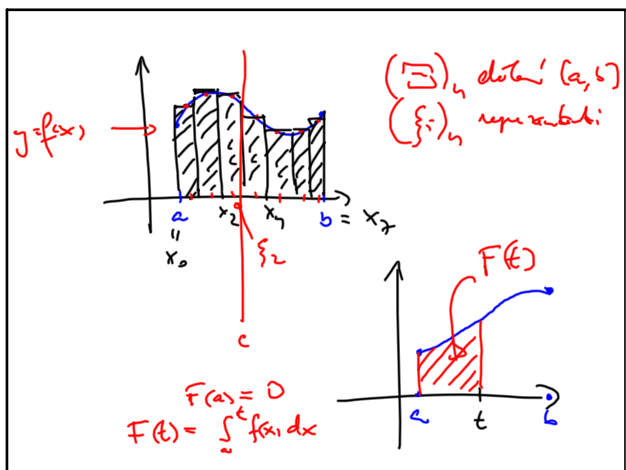
4 4-14:41

$$F'(x) = f(x)$$

$$(F + c)'(x) = F'(x) + 0 = f(x)$$

$$(F + c)(b) - (F + c)(a) = F(b) - F(a)$$

4 4-14:44



4 4-14:59

$$S_{\xi, \sup} := \sum_{i=1}^n \sup_{x_{i-1} \leq \xi \leq x_i} f(\xi) \cdot (x_i - x_{i-1})$$

$$S_{\xi, \inf} := \sum_{i=1}^n \inf_{x_{i-1} \leq \xi \leq x_i} f(\xi) \cdot (x_i - x_{i-1})$$

Lema po meri f naj existuj
 $S_{\sup} = \inf_{\xi} S_{\xi, \sup}$ $S_{\inf} = \sup_{\xi} S_{\xi, \inf}$
 a jati limitni hodi, naj deli sice.
 hodi Riem, integral hodi Riem.

4 4-15:13

n hodi
 $n_i \gg n$
 \Rightarrow splosni vzorec
 L. f spojiti na $[a, b] \Rightarrow S_{\sup} = S_{\inf}$
 $x \in (a, b) \quad f(x) = y \quad \forall \delta_x(f(x)) \exists \delta \delta(x)$
 $\Rightarrow \forall \epsilon > 0 \exists \delta > 0$
 $|y - z| < \delta \Rightarrow |f(y) - f(x)| < \epsilon$
 $\underline{\delta_x}$ komptent

4 4-15:30

$$\left| \sum_{i=1}^n \sup_{\xi_i} f(\xi) (x_i - x_{i-1}) - \sum_{i=1}^n \inf_{\xi_i} f(\xi) (x_i - x_{i-1}) \right|$$

$$\leq \sum_{i=1}^n \left| \sup_{\xi_i} f(\xi) - \inf_{\xi_i} f(\xi) \right| (x_i - x_{i-1})$$

$$\leq \epsilon \cdot \sum_{i=1}^n (x_i - x_{i-1}) = \epsilon \cdot (b - a)$$

po woli deli $< \delta$.

4 4-15:39

Po $\epsilon > 0$ woli δ tak da
 $|f(x + \Delta x) - f(x)| < \epsilon \quad \forall 0 \leq \Delta x < \delta$
 po nore $[a, t + \Delta t]$
 $\left| \frac{1}{\Delta t} \left(\int_a^{t+\Delta t} f(x) dx - \int_a^t f(x) dx \right) - f(t) \right| < \epsilon$
 $\Rightarrow f(t) = F'(t)$

4 4-15:43