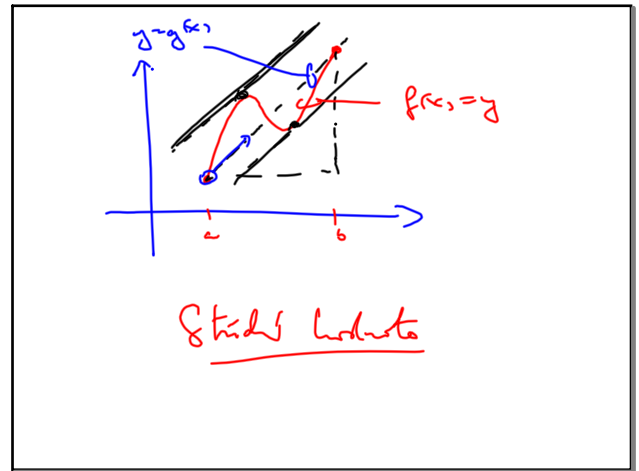
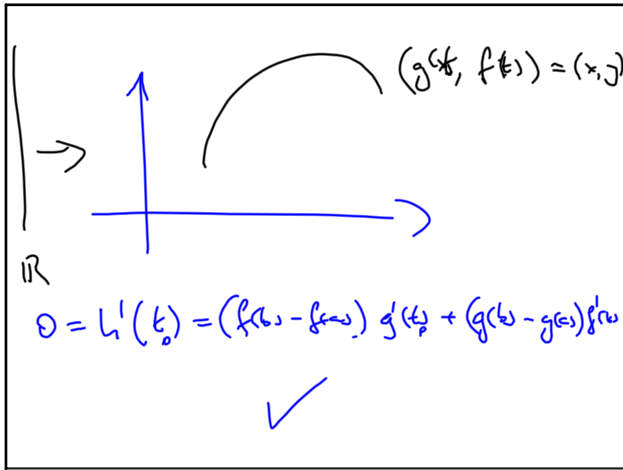


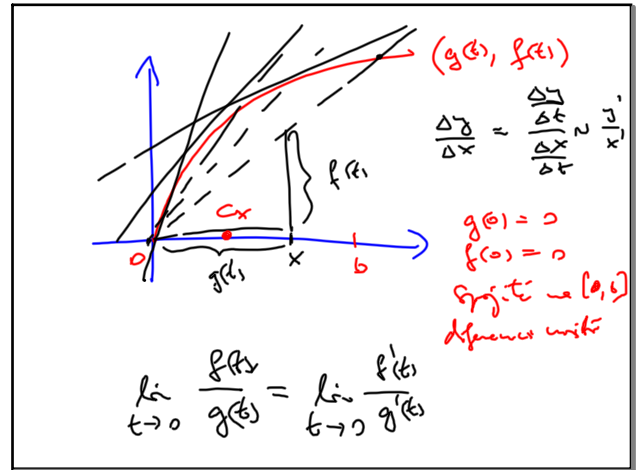
3 28-14:03



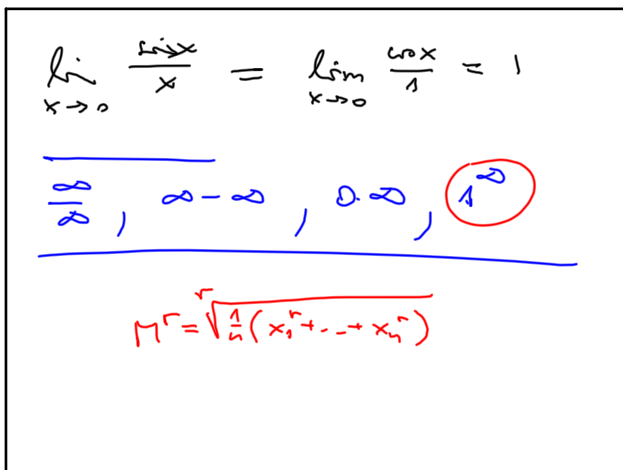
3 28-14:14



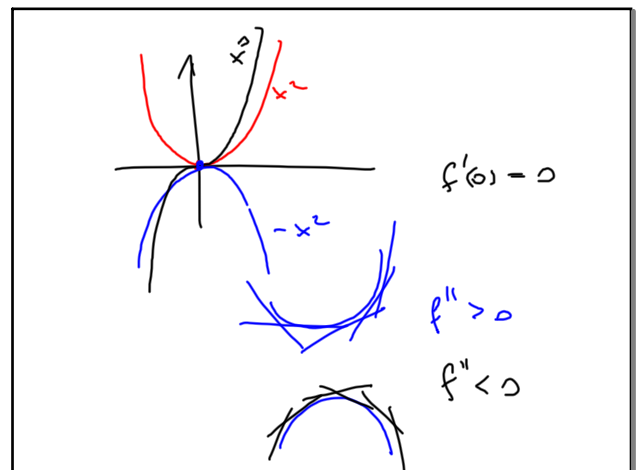
3 28-14:18



3 28-14:23



3 28-14:32



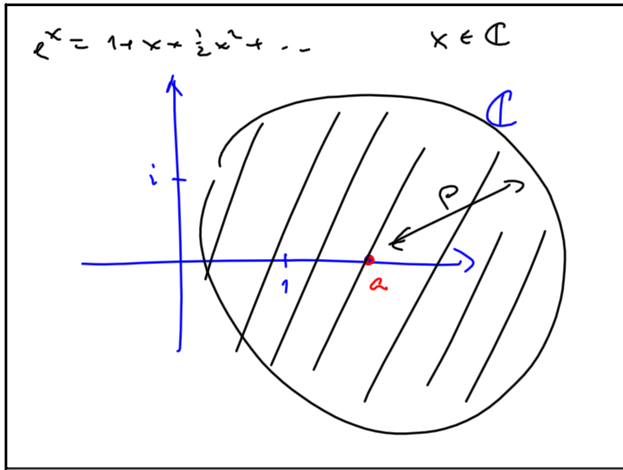
3 28-14:59

$f(x) = f(a) + f'(c)(x-a)$
Džerž (Taylorov útok)
 $f(x) = P_{\epsilon,1} f(x) + R$ $x \neq a$ druhá vyjádření
 vyjádření $R = \frac{1}{\epsilon!} r(x-a)^\epsilon$ vezme útok $F(a) = f(a)$
 Následující:
 $F(\xi) = \sum_{j=0}^{\epsilon-1} \frac{1}{j!} f^{(j)}(\xi) (x-\xi)^j + \frac{1}{\epsilon!} r(x-\xi)^\epsilon$
 $F'(\xi) = f'(\xi) + \sum_{j=1}^{\epsilon-1} \left(\frac{1}{j!} f^{(j)}(\xi) (x-\xi)^j - \frac{1}{(j-1)!} f^{(j)}(\xi) (x-\xi)^{j-1} \right) - \frac{1}{(\epsilon-1)!} r(x-\xi)^{\epsilon-1}$

3 28-15:10

$= \frac{1}{(\epsilon-1)!} f^{(\epsilon)}(\xi) (x-\xi)^{\epsilon-1} - \frac{1}{(\epsilon-1)!} r(x-\xi)^{\epsilon-1}$
 $= \frac{1}{(\epsilon-1)!} (x-\xi)^{\epsilon-1} (f^{(\epsilon)}(\xi) - r)$
 pitva platí $F(a) = f(a) = F(b)$
 \Rightarrow re. $c \in (a, x)$, $F'(c) = 0$
 \Rightarrow $f^{(\epsilon)}(c) = r$

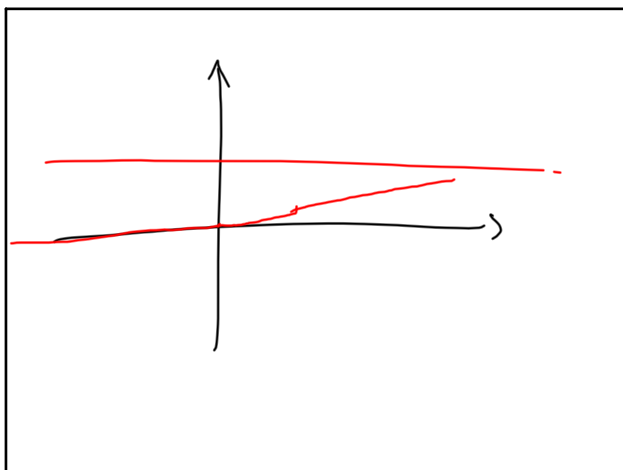
3 28-15:22



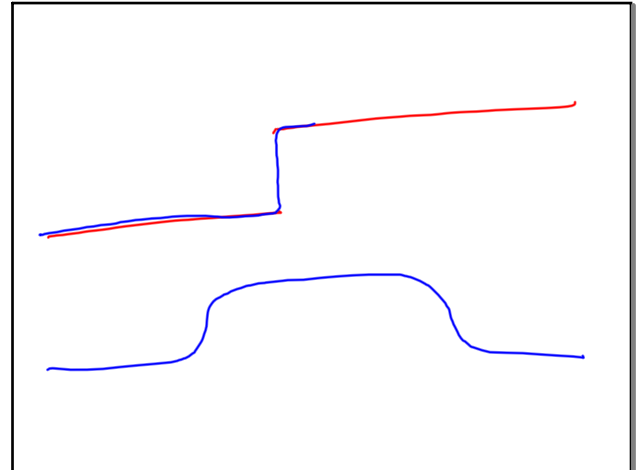
3 28-15:30

$f'(x) = (e^{-1/x^2})' = e^{-1/x^2} \cdot (-1)(-2) \frac{1}{x^3}$
 $= 2 \frac{e^{-1/x^2}}{x^3}$
 $f''(x) = 2 \cdot 2 e^{-1/x^2} x^{-3} x^{-3} - 6 e^{-1/x^2} x^{-4}$
lim $\frac{e^{-1/x^2}}{x^3} = 0$
lim $\frac{e^{-1/x^2}}{x^3} = \lim_{x \rightarrow 0} \frac{x^{-3}}{e^{1/x^2}} = \lim_{x \rightarrow 0} \frac{-3x^{-4}}{e^{1/x^2} \cdot (-1/x^3)}$
 $= \lim_{x \rightarrow 0} \frac{-3x^4}{e^{1/x^2} x^3} = 0$

3 28-15:34



3 28-15:44



3 28-15:46