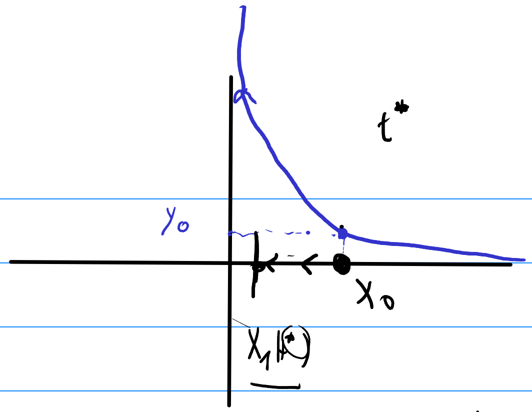
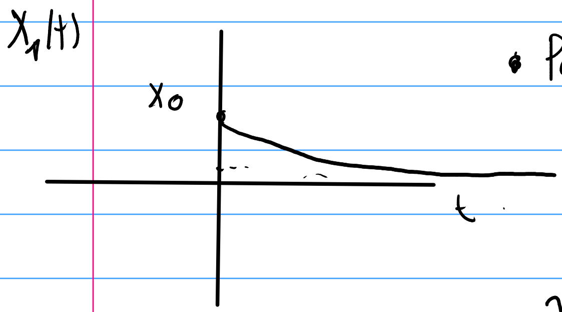


$\varphi : I(t_0,x_0) \to \mathbb{R}$

$I(t_0,x_0) \supset [0,+\infty)$

Si no $I(t_0,x_0) = ($[illegible]$, t^*)$, $\varphi(t) = (x_\varphi(t), y_\varphi(t))$

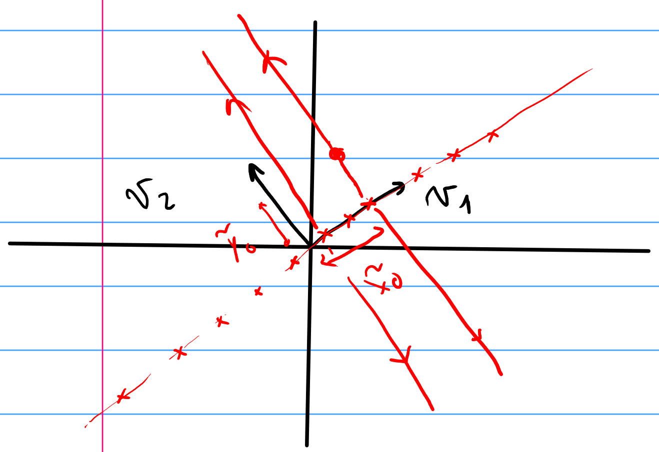


• Por la parte 1, la sol que arranca en $(x_0,0)$ le llamo $\varphi_1 : (0,+\infty) \to \mathbb{R}^2$, $\varphi_1(t) = (x_1(t), 0)$

$\psi(t) = (x_\varphi(t), 0)$, en $($[illegible]$, t^*)$ (donde tengo φ) es solución de la eq, con $\psi(0) = (x_\varphi(0), 0) = (x_0, 0)$.

$\Rightarrow$ $\mathrm{Dom}\,\psi \subset \mathrm{Dom}\,\varphi_1$ y $\varphi_1(t) = \psi(t)$ $t \in \mathrm{Dom}\,\psi$.

$\Rightarrow$ $\psi(t) = \lim_{t\to t^*} \varphi_1 = \varphi_1(t^*) = (x_1(t^*), 0) \to \lim_{t\to t^*} x_\varphi(t) = x_1(t^*) > 0$



$A \sim \begin{pmatrix} 0 & 0 \\ 0 & 1 \end{pmatrix}$, $B' = \{v_1, v_2\}$

$\tilde{x}$ $\tilde{y}=0$

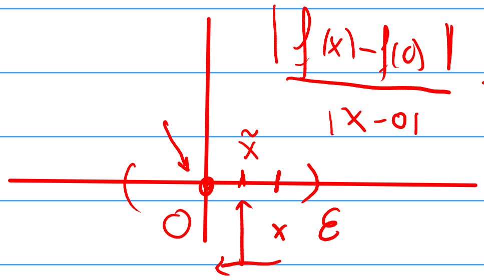
$\tilde{y}(t) = e^t \tilde{y}_0$

$\tilde{x}(t) = \tilde{x}_0$

$(0, x)$.

$\left(\sqrt{|x|}\right)' = \dfrac{1}{2\sqrt{|x|}} \to +\infty$

$x \to 0$



$\dfrac{|f(x)-f(0)|}{|x-0|} = |f'(\tilde{x})| \to +\infty$

$x \to 0$

$\tilde{x} \to 0$