$f : \mathbb{R}^2 \to \mathbb{R} \in C^2 :$
$P_2(x,y) = -2 + 2x - y - y^2$ en $(1,0)$
$g : \mathbb{R}^2 \to \mathbb{R}$
$g(x,y) = e^{f(x,y)} + xy - 2x$
QvQ$(1,0)$ es pto criticio de g
$g_x(x,y) = f_x(x,y)e^{f(x,y)} + y - 2$
$g_y(x,y) = f_y(x,y)e^{f(x,y)} + x$
$g_x(1,0) = f_x(1,0)e^{f(1,0)} - 2$
$g_y(1,0) = f_y(1,0)e^{f(1,0)} + 1$
$f(1,0) = P(1,0) = 0$
$f_x(1,0) = P_x(1,0) = 2$
$f_y(1,0) = P_y(1,0) = -1 \Rightarrow$
$g_x(1,0) = 0 \wedge g_y(1,0) = 0 \Rightarrow$
$\boldsymbol{\nabla}_g(1,0) = (0,0) \Rightarrow (1,0)$ es pto critico de g

- $g_{xx}(x,y) = f_{xx}(x,y)e^{f(x,y)} + f_x(x,y)^2 e^{f(x,y)}$
- $g_{yy}(x,y) = f_{yy}(x,y)e^{f(x,y)} + f_y(x,y)^2 e^{f(x,y)}$
- $g_{xy}(x,y) = f_{xy}(x,y)e^{f(x,y)} + f_x(x,y)f_y(x,y)e^{f(x,y)} + 1$

$H_g = |g_x|$