- $f(x_1, x_2) = x_1^2 + x_2^2$
- $g(x_1, x_2) = -x_1 - x_2 + 1 = 0$
- $h(x_1, x_2) = x_1^2 + x_2^2 + \lambda(-x_1 - x_2 + 1)$
- $\frac{\partial}{\partial x_1} h = 2x_1 - \lambda = 0$
- $\frac{\partial}{\partial x_2} h = 2x_2 - \lambda = 0$
- $\frac{\partial}{\partial \lambda} h = -x_1 - x_2 + 1 = 0$
- $2x_1 = \lambda \iff x_1 = \frac{\lambda}{2}$
- $2x_2 = \lambda \iff x_2 = \frac{\lambda}{2}$
- $-\frac{\lambda}{2} - \frac{\lambda}{2} + 1 = 0$

$-\lambda + 1 = 0$

$\underset{\sim}{\lambda = 1}, \quad x_1 = \frac{1}{2}, x_2 = \frac{1}{2}$