- $\frac{2x}{\theta} \cdot e^{\frac{-x^2}{\theta}} \rightarrow Ln\left(\frac{2x}{\theta}\right) + \ln\left(e^{\frac{-x^2}{\theta}}\right)$

$Ln\left(\frac{2x}{\theta}\right) - \frac{x^2}{\theta} \rightarrow \ln\left([2x \cdot \theta]^{-1}\right) = -\ln(2x\theta)$

- $-\ln(2x\theta) - \frac{x^2}{\theta} \rightarrow -\ln(2x) - \ln(\theta) - \frac{x^2}{\theta}$

- $-(n)\ln(2x) - (n)\ln(\theta) - \frac{x^2}{\theta} - \dots \frac{x_n^2}{\theta}$

- $\frac{\partial}{\partial\theta} = -\frac{n}{\theta} + \frac{x^2}{\theta^2} + \dots + \frac{x_n^2}{\theta} \rightarrow -\frac{n}{\theta} + \frac{1}{\theta}\left[x^2 + \dots x_n^2\right] = 0$

$-n + \frac{1}{\theta}\left[x^2 + \dots + x_n^2\right] \rightarrow n = \frac{1}{\theta}\left[x^2 + \dots + x_n^2\right] \rightarrow \theta = \frac{x^2 + \dots + x_n^2}{n}$

$\theta = \frac{0.5^2 + 0.5^2 + 1^2}{3} = 0.5$