c) Muestre que las derivadas parciales de la métrica están dadas por:

$$\frac{\partial \chi^2(\vec{\theta})}{\partial} = -2 \cdot \sum_{i=1}^{N} (y_i - M(x_i, \vec{\theta})) \cdot \frac{\partial M(x_i, \vec{\theta})}{\partial \theta}$$

tenemos que si $\chi^2(\vec{\theta})$

$$\frac{\partial \chi^2(\vec{\theta})}{\partial \theta_i} = \sum_{i=1}^{n} \frac{\partial}{\partial \theta_i} (y_i - M(x_i, \vec{\theta}))^2$$

$$\frac{\partial \chi^2(\vec{\theta})}{\partial \theta_i} = \sum_{i=1}^{N} (2)(y_i - M(x_i, \vec{\theta}))\left(-\frac{\partial M(x_i, \vec{\theta})}{\partial \theta_i}\right) = -2 \sum_{i=1}^{N} (y_i - M(x_i, \theta)) \frac{\partial}{\partial}$$

Por tanto queda demostrado mediante el anterior procedimiento