Sea $\left[\frac{\partial x^2}{\partial a_0}, \frac{\partial x^2}{\partial a_1}\right]$

$$\frac{\partial x^2}{\partial a_0} = -2 \sum Y_i - a_0 n - \sum a_1 x_i = 0;$$

$$\frac{\partial x^2}{\partial a_1} = \sum Y_i - a_1 \sum x_i = a_0 n$$

$$\frac{\sum Y_i}{n} = \bar{Y} \; ; \; \frac{\sum x_i}{n} = \bar{x}$$

$$-2 x_i \left(\sum Y_i - (\bar{Y} - a_i \bar{x}) n - \sum a x_i x_i = 0\right.$$

$$\sum Y_i x_i - \bar{Y} n x_i = a_1 \bar{x} n x_i + a_1 \sum x_1 x_1$$

$$a_1 = \frac{\sum Y_1 x_1 - \frac{\sum Y_1 x_i}{n}}{\sum x_i^2 n + \sum x_i^2}$$

Sea pues $Dx^2(a_0, a_1, a_2) = \left[\frac{\partial x^2}{\partial a_0}, \frac{\partial x^2}{\partial a_1}, \frac{\partial x^2}{\partial a_2}\right]$ $= [0, 0, 0]$. Luego podemos decir:

$$\frac{\partial x^2}{\partial a_0} = -2\sum_{i=1}^{n} (y_i - a_0 - a_1 x_1 - a_2 x_i^2) = 0 \to \sum_{i=0}^{n} y_i =$$

$$\frac{\partial x}{\partial a_1} = -2\sum_{i=1}^{n} x_i (y_i - a_0 - a_1 x_1 - a_2 x_i^2) = 0 \to \sum_{i=0}^{n} y_i x_i =$$

$$\frac{\partial x^2}{\partial a_2} = -2\sum_{i=1}^{n} x_i^2 (y_i - a_0 - a_1 x_i - a_2 x_i^2) = 0 \to \sum_{i=0}^{n} y_i x_i^2 =$$

Sea pues $DX^2(a_0, a_1, a_2) = \left[\frac{\partial X^2}{\partial a_0}, \frac{\partial X^2}{\partial a_1}, \frac{\partial X^2}{\partial a_2}\right]$

$= [0, 0, 0]$. Luego podemos decir:

$$\frac{\partial X^2}{\partial a_0} = -2\sum_{i=1}^{n}(y_i - a_0 - a_1 x_i - a_2 x_i^2) = 0 \to \sum_{i=0}^{n} y_i = \sum_{i=0}^{n}(a_0 - a_1 x_i - a_2 x_i^2)$$

$$\frac{\partial x}{\partial a_1} = -2\sum_{i=1}^{n} x_i(y_i - a_0 - a_1 x_i - a_2 x_i^2) = 0 \to \sum_{i=0}^{n} y_i x_i = \sum_{i=0}^{n}(a_0 x_i - a_1 x_i^2 - a_2 x_i^3)$$

$$\frac{\partial X^2}{\partial a_2} = -2\sum_{i=1}^{n} x_i^2(y_i - a_0 - a_1 x_i - a_2 x_i^2) = 0 \to \sum_{i=0}^{n} y_i x_i^2 = \sum_{i=0}^{n}(a_0 x_i^2 - a_1 x_i^3 - a_2 x_i^4)$$