6) $\frac{dX^2}{da_0} = -2(\Sigma(y_i - a_0 - a_1 x_i))$

$\frac{dX^2}{da_1} = 2(\Sigma(y_i - a_0 - a_1 x_i)) \cdot -x_i$

$-2\Sigma y_i - a_0 n - \Sigma a_1 x_i = 0$

$\Sigma y_i - a_1 \Sigma x_i = a_0 n$; $\frac{\Sigma y_i}{n} = \bar{y}$

$\boxed{\bar{y} - a_1 \bar{x} = a_0}$ $\frac{\Sigma x_i}{n} = \bar{x}$

$-2x_i(\Sigma y_i - (\bar{y} - a_1 \bar{x})n - \Sigma a_1 x_i x_i = 0$

$\Sigma y_i x_i - \bar{y} n x_i = a_1 \bar{x} n x_i + a_1 \Sigma x_i x_i$

$\frac{\Sigma y_i x_i - \frac{\Sigma y_i x_i n}{n}}{\Sigma x_i^2 n + \Sigma x_i^2} = a_1$

b) $\frac{\partial \chi^2}{\partial a_0} = 2\left(\sum y_i - a_0 n - a_1 \sum x_i - a_2 \sum x_i^2\right)$

$\frac{\partial \chi^2}{\partial a_i} = 2\left(\sum y_i - a_0 n - a_1 \sum x_i - a_2 \sum x_i^2\right) -$

$\frac{\partial \chi^2}{\partial a_2} = 2\left(\sum y_i - a_0 n - a_1 \sum x_i - a_2 \sum x_i^2\right) - x_i^2$

Em el pto $(0,0,0)$:

$$\sum \left(y_i - a_0 - a_1 x_i - a_2 x_i^2\right) = 0$$

$$\boxed{\sum \left(a_0 - a_1 x_i - a_2 x_i^2\right) = \sum y_i}$$

$$\sum y_i x_i = \sum \left(a_0 x_i + a_1 x_i^2 + a_2 x_i^3\right)$$

$$\sum y_i x_i^2 = \sum \left(a_0 x_i^2 + a_1 x_i^3 + a_2 x_i^4\right)$$