

$$x_{mp} = \frac{\sum w_i \cdot x_i}{\sum w_i} \quad \text{onde} \quad w_i = \frac{1}{\sigma_i^2}$$

$$\sigma_{mp}^2 = \left(\frac{\partial x_{mp}}{\partial x_1} \right)^2 \sigma_1^2 + \left(\frac{\partial x_{mp}}{\partial x_2} \right)^2 \sigma_2^2 + \dots +$$

$$+ \left(\frac{\partial x_{mp}}{\partial x_n} \right)^2 \sigma_n^2$$

$$\sigma_{mp}^2 = \sum_{j=1}^n \left(\frac{\partial x_{mp}}{\partial x_j} \right)^2 \sigma_j^2$$