$$y = e^{ax+b}$$

$$\ln y = ax + b$$

$$E(a,b) = \sum_{k=0}^{n} \left(\ln y - ax_k - b \right)^2$$

$$\begin{cases} E'(a) = \cancel{2}\sum_{k=0}^{n} \left(\ln y_k - ax_k - b \right)(-x_k) = \textcolor{red}{0} \\[4mm] E'(b) = \cancel{2}\sum_{k=0}^{n} \left(\ln y - ax_k - b \right)(-1) = \textcolor{red}{0} \end{cases}$$

$$\begin{cases} \sum_{k=0}^{n} \ln y_k x_k = a\sum_{k=0}^{n} x_k^2 + b\sum_{k=0}^{n} x_k \\[4mm] \sum_{k=0}^{n} \ln y_k = a\sum_{k=0}^{n} x_k + b \cdot 8 \end{cases}$$

$$b = \frac{1}{8}\left(\sum_{k=0}^{n} \ln y_k - a\sum_{k=0}^{n} x_k \right)$$

$$\sum_{k=0}^{n} \ln y_k x_k - b\sum_{k=0}^{n} x_k = a\sum_{k=0}^{n} x_k^2$$

$$\sum_{k=0}^{n} \ln y_k x_k - \frac{1}{8}\left(\sum_{k=0}^{n} \ln y_k - a\sum_{k=0}^{n} x_k \right)\sum_{k=0}^{n} x_k = a\sum_{k=0}^{n} x_k^2$$

$$\sum_{k=0}^{n} \ln y_k x_k - \frac{1}{8}\sum_{k=0}^{n} \ln y_k \sum_{k=0}^{n} x_k = a\sum_{k=0}^{n} x_k^2 - \frac{1}{8}a\sum_{k=0}^{n} x_k \sum_{k=0}^{n} x_k$$

$$a = \frac{\displaystyle\sum_{k=0}^{n} \ln y_k x_k - \frac{1}{8}\sum_{k=0}^{n} \ln y_k \sum_{k=0}^{n} x_k}{\displaystyle\sum_{k=0}^{n} x_k^2 - \frac{1}{8}\sum_{k=0}^{n} x_k \sum_{k=0}^{n} x_k}$$