1 Equation 1

$$\min_{\beta_0, \boldsymbol{\beta}} \; -\frac{1}{N} \sum_{i=1}^{N} w_i \, L(y_i, \beta_0 + \boldsymbol{x}^T \boldsymbol{\beta}) + \lambda \left(\frac{1-\alpha}{2} \|\beta\|_2^2 + \alpha \|\beta\|_1 \right)$$

$$\text{subject to: } \sum_{j=1}^{p} \beta_j \stackrel{!}{=} 0$$

2 Equation 2

$$y_i \sim \beta_0 + \sum_{j=1}^{p} \beta_j \log(\gamma_i \, x_{ij})$$

$$y_i \sim \beta_0 + \sum_{j=1}^{p} \beta_j \log(\gamma_i) + \sum_{j=1}^{p} \beta_j \log(x_{ij})$$

$$y_i \sim \beta_0 + \log(\gamma_i) \sum_{j=1}^{p} \beta_j + \sum_{j=1}^{p} \beta_j \log(x_{ij})$$

3 Equation 3

$$\sum_{j=1}^{p} v_j \cdot \left(\frac{1-\alpha}{2} \beta_j^2 + \alpha |\beta_j| \right)$$

4 Equation 4

$$\sum_{j=1}^{p} u_j \cdot \beta_j \stackrel{!}{=} 0$$