

$$\ln\left(\frac{\exp\left(w_{y_n}^T x\right)}{\sum_{i=1}^K \exp\left(w_i^T x\right)}\right) = \ln\left(\exp\left(w_{y_n}^T x\right)\right) - \ln\left(\sum_{i=1}^K \exp\left(w_i^T x\right)\right) = w_{y_n}^T x - \ln\left(\sum_{i=1}^K \exp\left(w_i^T x\right)\right)$$