$$\begin{aligned}
\mathbf{a}^* &= \arg \max_{\mathbf{a} \in [0,1,\ldots,n]^m} p(\mathbf{a} \mid \mathbf{e}, \mathbf{f}) \\
&= \arg \max_{\mathbf{a} \in [0,1,\ldots,n]^m} \frac{p(\mathbf{e}, \mathbf{a} \mid \mathbf{f})}{\sum_{\mathbf{a}'} p(\mathbf{e}, \mathbf{a}' \mid \mathbf{f})} \\
&= \arg \max_{\mathbf{a} \in [0,1,\ldots,n]^m} p(\mathbf{e}, \mathbf{a} \mid \mathbf{f})
\end{aligned}$$