Exercise: Markov blanket for a DGM

Prove that the full conditional for node i in a DGM is given by

$$p(X_i|X_{-i}) \quad \propto \quad p(X_i|\mathrm{pa}(X_i)) \prod_{Y_j \in \mathrm{ch}(X_i)} p(Y_j|\mathrm{pa}(Y_j)) \tag{1}$$

where $\mathrm{ch}(X_i)$ are the children of X_i and $\mathrm{pa}(Y_j)$ are the parents of Y_j.