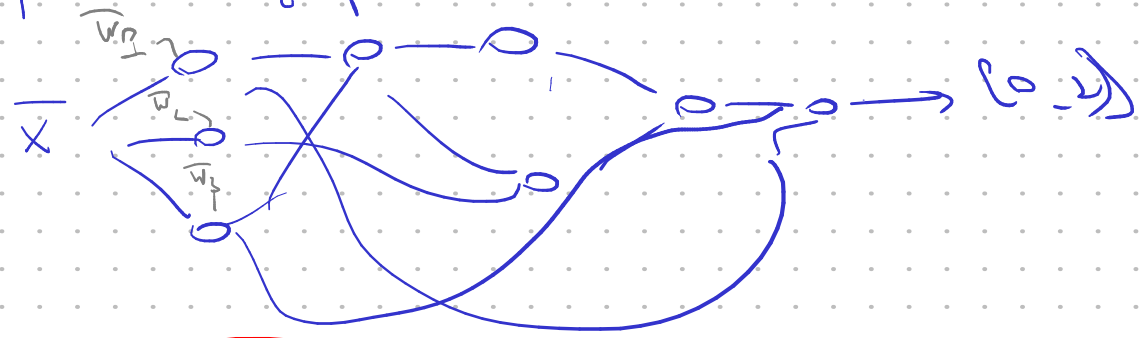


Computational graph

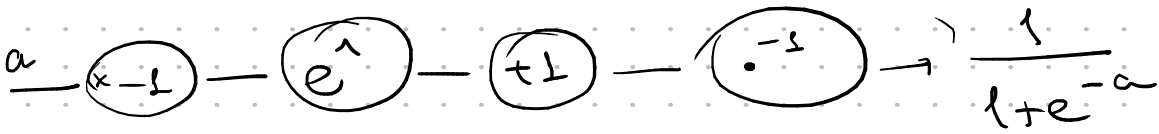
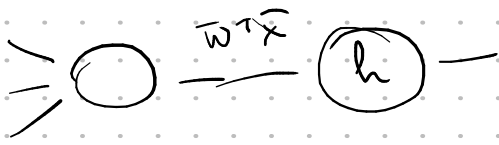


$$q(\bar{x}) \approx \underbrace{F(\bar{x}, \bar{w})}_{\text{var. param.}} \approx y \quad D = \{(x, y)\}$$

$$\underbrace{\log p(y | \bar{x}, \bar{w})}_{\approx} \approx d(F(\bar{x}, \bar{w}), y)$$

$$\underbrace{(F - y)}_{\approx} \rightarrow \min$$

$$\sum_k y_k \log F(\bar{x}, \bar{w}) \rightarrow \max$$

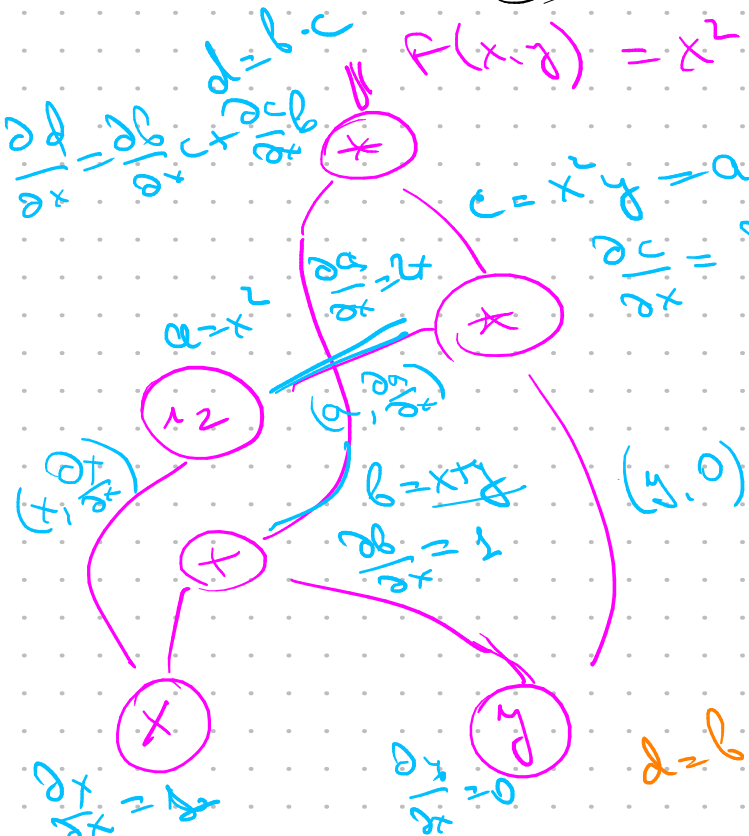


$$F(\bar{w}) \rightarrow \min$$

$$\bar{w} := \bar{w} - \eta \nabla_{\bar{w}} F(\bar{w})$$

$\frac{\partial F}{\partial c}$
 $\frac{\partial F}{\partial b}$

$$F(x,y) = x^2 \cdot y \cdot (x+y)$$



- forward propagation
- backpropagation

