$$y$$

$$a^L \qquad z^L$$

$$y$$

$$\boxed{-} \qquad \boxed{\sigma'}$$

$$\boxed{\cdot} \qquad \boxed{T} \qquad w^L$$

$$\delta^L$$

$$\boxed{*} \qquad \boxed{\sigma'} \qquad z^{L-1}$$

$$\boxed{\cdot} \qquad \boxed{T} \qquad w^{L-1}$$

$$\delta^{L-1}$$

$$\boxed{*} \qquad \vdots$$

$$\vdots$$

$$a^L = \sigma(z^L) = \sigma(w^L a^{L-1} + b^L)$$

$$\Delta b_j^L = \frac{\partial C}{\partial b_j^L} = \delta_j^L$$

$$\Delta w_{jk}^L = \frac{\partial C}{\partial w_{jk}^L} = a_k^{L-1} \delta_j^L$$

$$(1)$$