$$\vec{\delta}^{(1)} = \begin{pmatrix} \delta_1^{(1)} \\ \delta_2^{(1)} \end{pmatrix} = \begin{pmatrix} [\![s_1^{(1)} \geq 0]\!] & 0 \\ 0 & [\![s_2^{(1)} \geq 0]\!] \end{pmatrix} \begin{pmatrix} w_{11}^{(2)} & w_{12}^{(2)} & w_{13}^{(2)} \\ w_{21}^{(2)} & w_{22}^{(2)} & w_{23}^{(2)} \end{pmatrix} \begin{pmatrix} \delta_1^{(2)} \\ \delta_2^{(2)} \\ \delta_3^{(2)} \end{pmatrix}$$

$$= \begin{pmatrix} 0 & 0 \\ 0 & 0 \end{pmatrix} \begin{pmatrix} -0.29 & -0.29 & -0.29 \\ -0.29 & -0.29 & -0.29 \end{pmatrix} \begin{pmatrix} 2.77 \\ 2.77 \\ 2.77 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}$$

令$\eta = 0.01$，利用梯度下降法进行权系数更新：

$$\mathbf{w}_4^{(1)} = \mathbf{w}_3^{(1)} - \eta \vec{x}_n^{(0)} \overrightarrow{(\delta^{(1)})}^T = \mathbf{w}_3^{(1)} - \eta \begin{pmatrix} 1 \\ x_{n1}^{(0)} \\ x_{n2}^{(0)} \end{pmatrix} \left(\delta_1^{(1)}, \delta_2^{(1)} \right)$$

$$= \begin{pmatrix} w_{01}^{(1)} & w_{02}^{(1)} \\ w_{11}^{(1)} & w_{12}^{(1)} \\ w_{21}^{(1)} & w_{22}^{(1)} \end{pmatrix} - \eta \begin{pmatrix} \delta_1^{(1)} & \delta_2^{(1)} \\ x_{n1}^{(0)} \delta_1^{(1)} & x_{n1}^{(0)} \delta_2^{(1)} \\ x_{n2}^{(0)} \delta_1^{(1)} & x_{n2}^{(0)} \delta_2^{(1)} \end{pmatrix}$$

$$= \begin{pmatrix} -0.17 & -0.17 \\ -0.35 & -0.35 \\ -0.35 & -0.35 \end{pmatrix} - 0.01 \begin{pmatrix} 0 & 0 \\ (+1)*0 & (+1)*0 \\ (-1)*0 & (-1)*0 \end{pmatrix}$$

$$= \begin{pmatrix} -0.17 & -0.17 \\ -0.35 & -0.35 \\ -0.35 & -0.35 \end{pmatrix}$$

$$\mathbf{w}_4^{(2)} = \mathbf{w}_3^{(2)} - \eta \vec{x}_n^{(1)} \overrightarrow{(\delta^{(2)})}^T = \mathbf{w}_3^{(2)} - \eta \begin{pmatrix} 1 \\ x_1^{(1)} \\ x_2^{(1)} \end{pmatrix} \left(\delta_1^{(2)}, \delta_2^{(2)}, \delta_3^{(2)} \right)$$

$$= \begin{pmatrix} w_{01}^{(2)} & w_{02}^{(2)} & w_{03}^{(2)} \\ w_{11}^{(2)} & w_{12}^{(2)} & w_{13}^{(2)} \\ w_{21}^{(2)} & w_{22}^{(2)} & w_{23}^{(2)} \end{pmatrix} - \eta \begin{pmatrix} \delta_1^{(2)} & \delta_2^{(2)} & \delta_3^{(2)} \\ x_1^{(1)} \delta_1^{(2)} & x_1^{(1)} \delta_2^{(2)} & x_1^{(1)} \delta_3^{(2)} \\ x_2^{(1)} \delta_1^{(2)} & x_2^{(1)} \delta_2^{(2)} & x_2^{(1)} \delta_3^{(2)} \end{pmatrix}$$

$$= \begin{pmatrix} 0.42 & 0.42 & 0.42 \\ -0.29 & -0.29 & -0.29 \\ -0.29 & -0.29 & -0.29 \end{pmatrix} - 0.01 \begin{pmatrix} 2.77 & 2.77 & 2.77 \\ 0*2.77 & 0*2.77 & 0*2.77 \\ 0*2.77 & 0*2.77 & 0*2.77 \end{pmatrix}$$

$$= \begin{pmatrix} 0.39 & 0.39 & 0.39 \\ -0.29 & -0.29 & -0.29 \\ -0.29 & -0.29 & -0.29 \end{pmatrix}$$