$$\mathbf{w}_2^{(2)} = \mathbf{w}_1^{(2)} - \eta \vec{x}_n^{(1)} \overrightarrow{(\delta^{(2)})}^T = \mathbf{w}_1^{(2)} - \eta \begin{pmatrix} 1 \\ x_1^{(1)} \\ x_2^{(1)} \end{pmatrix} \left(\delta_1^{(2)}, \delta_2^{(2)}, \delta_3^{(2)} \right)$$

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

$$= \begin{pmatrix} 0.58 & 0.58 & 0.58 \\ -0.26 & -0.26 & -0.26 \\ -0.26 & -0.26 & -0.26 \end{pmatrix}$$

$$- 0.01 \begin{pmatrix} 11.56 & 11.56 & 11.56 \\ 0.26*11.56 & 0.26*11.56 & 0.26*11.56 \\ 0.26*11.56 & 0.26*11.56 & 0.26*11.56 \end{pmatrix}$$

$$= \begin{pmatrix} 0.46 & 0.46 & 0.46 \\ -0.29 & -0.29 & -0.29 \\ -0.29 & -0.29 & -0.29 \end{pmatrix}$$

$$\mathbf{w}_2^{(3)} = \mathbf{w}_1^{(3)} - \eta \vec{x}_n^{(2)} \overrightarrow{(\delta^{(3)})}^T = \mathbf{w}_1^{(3)} - \eta \begin{pmatrix} 1 \\ x_1^{(2)} \\ x_2^{(2)} \\ x_3^{(2)} \end{pmatrix} \delta_1^{(3)}$$

$$= \begin{pmatrix} 0.58 \\ -1.94 \\ -1.94 \\ -1.94 \end{pmatrix} - 0.01 \begin{pmatrix} -5.96 \\ 0.44*(-5.96) \\ 0.44*(-5.96) \\ 0.44*(-5.96) \end{pmatrix} = \begin{pmatrix} 0.64 \\ -1.91 \\ -1.91 \\ -1.91 \end{pmatrix}$$

t=3，对于第三个样本 $\vec{x}_3 = (-1,1)^T$，则第一层神经元的输入为：

$$\begin{pmatrix} s_1^{(1)} \\ s_2^{(1)} \end{pmatrix} = (\mathbf{w}^{(1)})^T \vec{x}_n^{(0)} = \begin{pmatrix} -0.17 & -0.35 & -0.35 \\ -0.17 & -0.35 & -0.35 \end{pmatrix} \begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix} = \begin{pmatrix} -0.17 \\ -0.17 \end{pmatrix}$$

则：$\begin{pmatrix} x_1^{(1)} \\ x_2^{(1)} \end{pmatrix} = \begin{pmatrix} \max{(0, s_1^{(1)})} \\ \max{(0, s_2^{(1)})} \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}$

第二层神经元的输入为：

$$\begin{pmatrix} s_1^{(2)} \\ s_2^{(2)} \\ s_3^{(2)} \end{pmatrix} = (\mathbf{w}^{(2)})^T \begin{pmatrix} 1 \\ x_1^{(1)} \\ x_2^{(1)} \end{pmatrix} = \begin{pmatrix} 0.46 & -0.29 & -0.29 \\ 0.46 & -0.29 & -0.29 \\ 0.46 & -0.29 & -0.29 \end{pmatrix} \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix} = \begin{pmatrix} 0.46 \\ 0.46 \\ 0.46 \end{pmatrix}$$

则：$\begin{pmatrix} x_1^{(2)} \\ x_2^{(2)} \\ x_3^{(2)} \end{pmatrix} = \begin{pmatrix} 0.46 \\ 0.46 \\ 0.46 \end{pmatrix}$