## **In-Class Activity 8**

$$p_1 net = [-2.5 \quad 1.75] \begin{bmatrix} 1 \\ 1 \end{bmatrix} = -0.75$$
  
 $sgn(net) = 2$   
 $w^2 = w^1 + 2 \begin{bmatrix} 1 \\ 1 \end{bmatrix} = \begin{bmatrix} -2.5 \\ 1.75 \end{bmatrix} + \begin{bmatrix} 2 \\ 2 \end{bmatrix} = \begin{bmatrix} -0.5 \\ 3.75 \end{bmatrix}$ 

$$p_{2}net = \begin{bmatrix} -0.5 & 3.75 \end{bmatrix} \begin{bmatrix} -0.75 \\ 1 \end{bmatrix} = 4.125$$

$$sgn(net) = -2$$

$$w^{3} = w^{2} - 2 \begin{bmatrix} -0.75 \\ 1 \end{bmatrix} = \begin{bmatrix} -0.5 \\ 3.75 \end{bmatrix} + \begin{bmatrix} 1.5 \\ -2 \end{bmatrix} = \begin{bmatrix} 1 \\ 1.75 \end{bmatrix}$$

$$p_3 net = \begin{bmatrix} 1 & 1.75 \end{bmatrix} \begin{bmatrix} 2.5 \\ 1 \end{bmatrix} = 4.25$$
  
 $sgn(net) = 0$   
 $w^4 = w^3 + 0 = w^3$