Nodes: $(1,2,3) \rightarrow (j, i) \rightarrow k$

$$net_j = w_{1j} \times 1 + w_{2j} \times 0{,}4 + w_{3j} \times 0{,}7 + w_{0j} \times 1$$
$$= 0{,}2 \times 1 + 0{,}3 \times 0{,}4 + (-0{,}1) \times 0{,}7 + 0{,}1 \times 1$$
$$= 0{,}35$$

$$out_j = \frac{1}{1 + e^{-net_j}} = \frac{1}{1 + e^{-0{,}35}} = 0{,}587$$

$$net_i = w_{1i} \times 1 + w_{2i} \times 0{,}4 + w_{3i} \times 0{,}7 + w_{0i} \times 1$$
$$= 0{,}1 \times 1 + (-0{,}1) \times 0{,}4 + 0{,}2 \times 0{,}7 + 0{,}14 \times 1$$
$$= 0{,}34$$

$$out_i = 0{,}584$$

$$net_k = w_{jk} \times out_j + w_{ik} \times out_i + w_{0k} \times 1$$
$$= 0{,}1 \times 0{,}587 + 0{,}5 \times 0{,}584 + 0{,}15 \times 1$$
$$= 0{,}496$$

$$out_k = 0{,}622$$

$$E_{total} = \frac{1}{2}(1 - out_k)^2 = \frac{1}{2}(1 - 0{,}622)^2 = 0{,}07$$

$$\frac{\partial E_{total}}{\partial w_{jk}} = \frac{\partial E_{total}}{\partial out_k} \times \frac{\partial out_k}{\partial net_k} \times \frac{\partial net_k}{\partial w_{jk}}$$

$$\frac{\partial E_{total}}{\partial out_k} = -(1 - out_k) = -0{,}378$$

$$\frac{\partial out_k}{\partial net_k} = out_k(1 - out_k) = 0{,}235$$

$$\frac{\partial net_k}{\partial w_{jk}} = out_j = 0,587$$

$$\frac{\partial E_{total}}{\partial w_{jk}} = (-0,378) \times 0,235 \times 0,587$$

$$\frac{\partial E_{total}}{\partial w_{jk}} = -0,052$$

$$w_{jk}^{+} = w_{jk} - \eta \frac{\partial E_{total}}{\partial w_{jk}} = 0,1 - 0,5 \times (-0,052)$$

$$= 0,126$$

$$w_{ik}^{+} = 0,526$$

$$\frac{\partial E_{total}}{\partial w_{ij}} = \frac{\partial E_{total}}{\partial out_j} \times \frac{\partial out_j}{\partial net_j} \times \frac{\partial net_j}{\partial w_{ij}}$$

$$\frac{\partial E_{total}}{\partial out_j} = \frac{\partial E_{total}}{\partial net_k} \times \frac{\partial net_k}{\partial out_j}$$

$$\frac{\partial E_{total}}{\partial net_k} = \frac{\partial E_{total}}{\partial out_k} \times \frac{\partial out_k}{\partial net_k}$$

$$= -0,378 \times 0,235 = -0,089$$

$$\frac{\partial net_k}{\partial out_j} = w_{jk} = 0,1$$

$$\Rightarrow \frac{\partial E_{total}}{\partial out_j} = -0,089 \times 0,1 = -0,0089$$

$$\frac{\partial out_j}{\partial net_j} = out_j(1 - out_j) = 0,584(1 - 0,584)$$

$$= 0,243$$

$$\frac{\partial net_j}{\partial w_{1j}} = i_1 = 1$$

$$\frac{\partial E_{total}}{\partial w_{1j}} = (-0,0089) \times 0,243 \times 1 = -0,00216$$

$$w_{1j}^{+} = w_{1j} - \eta \times \frac{\partial E_{total}}{\partial w_{1j}} = 1 - 0,5 \times (-0,00216) = 1,00108$$

tương tự cho $w_{11}^{+}, w_{2j}^{+}, \ldots$