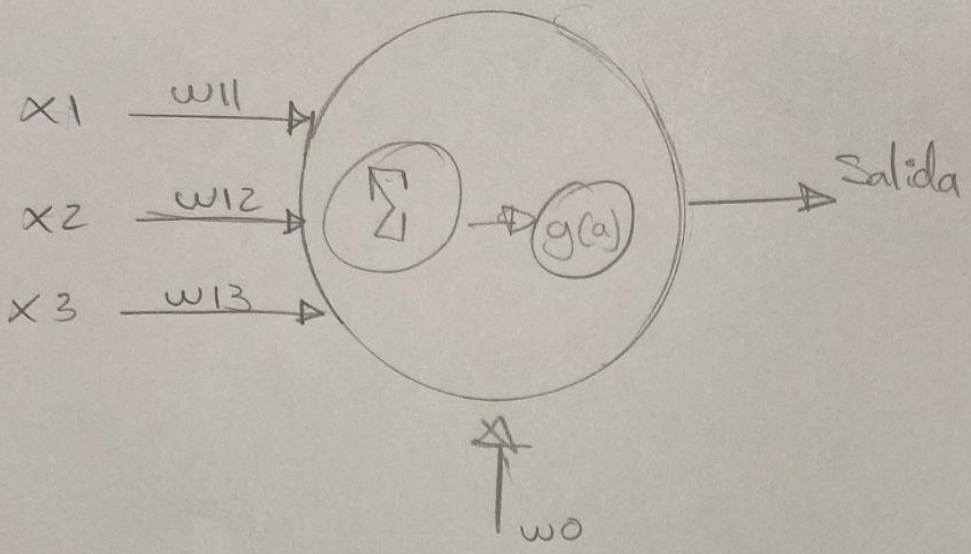


$$x = \begin{bmatrix} x1 \\ x2 \\ x3 \end{bmatrix} = \begin{bmatrix} 4.8 \\ 25.5 \\ -3.3 \end{bmatrix} \qquad w = \begin{bmatrix} w11 \\ w12 \\ w13 \\ wb \end{bmatrix} \begin{bmatrix} -1.2 \\ 8 \\ 12.7 \\ 0.33 \end{bmatrix}$$

Solución del perceptrón

$$a = \sum_{i=0}^{n} (w_i x_i) + w_o = \underline{156.66}$$

$$a = (4.8 * -1.2) + (25.5 * 8) + (-3.3 * 12.7) + 0.33 =$$

$$a = (-5.76 + 204 + -41.91) + 0.33 = \underline{156.66}$$

Evaluando con función sigmoide

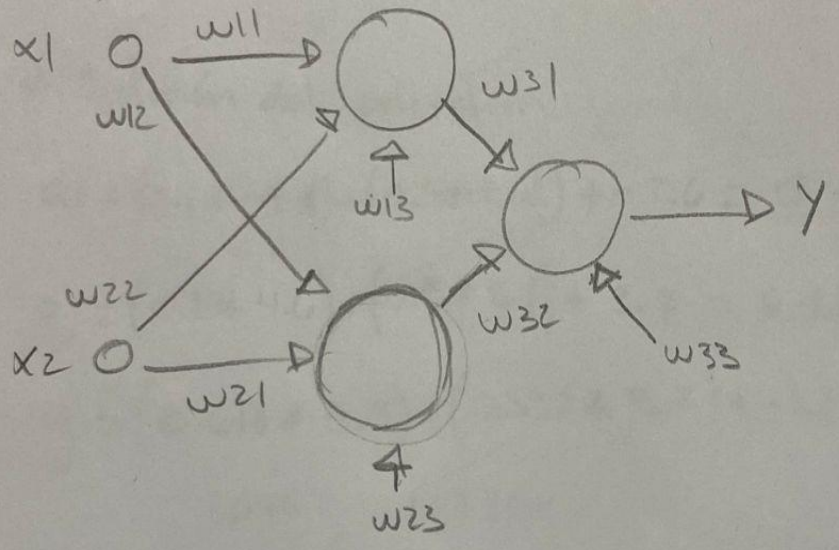
$$g(a) = \frac{1}{1 + e^{-156.66}} = 1$$

Resultado = 1

#Evaluando con función tangente hiperbolica

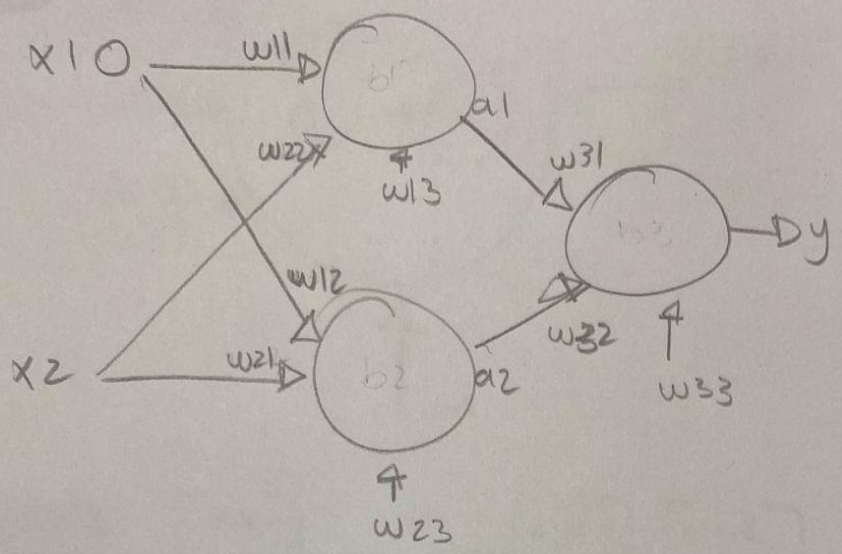
$$g(a) = \frac{e^{a} - e^{-a}}{e^{a} + e^{-a}} = \frac{e^{156.66} - e^{-156.66}}{e^{156.66} + e^{-156.66}} = 1$$

$$\tanh(a) = 1$$



$$x = \begin{bmatrix} x1 \\ x2 \end{bmatrix} = \begin{bmatrix} 0.1 \\ 0.5 \end{bmatrix} \quad w2 \begin{bmatrix} w11 & w12 & w13 \\ w21 & w22 & w23 \\ w31 & w32 & w33 \end{bmatrix} = \begin{bmatrix} 4.8 & 4.6 & -2.6 \\ 5.1 & -5.2 & 3.2 \\ 5.9 & 5.2 & -1.3 \end{bmatrix}$$

$w2 = \begin{bmatrix}$



Solución del perceptron

$a1 = (0.1 * -4.8) + (0.5 * -5.2) + -2.6 = 0.48$

$a2 = (0.1 * 4.6) + (0.5 * 5.1) + 3.2 = 6.21$

$y = (0.618 * 5.9) + (0.332 * 5.2) + -1.3 = 4.07$

36462 1.7264

Evaluando con función Sigmoide

$a1 = g(a) = \frac{1}{1+e^{-0.48}} = 0.618$

$a2 = g(a) = \frac{1}{1+e^{-6.21}} = 0.332$

9.68

$y = g(a) = \frac{1}{1+e^{-4.07}} = 0.98$

Resultado = 0.98

#

Evaluando tangente hiperbolica

$$g(a) = \frac{e^{a} - e^{-a}}{e^{a} + e^{-a}} = \frac{e^{4.07} - e^{-4.07}}{e^{4.07} + e^{-4.07}} = \underline{0.99}$$