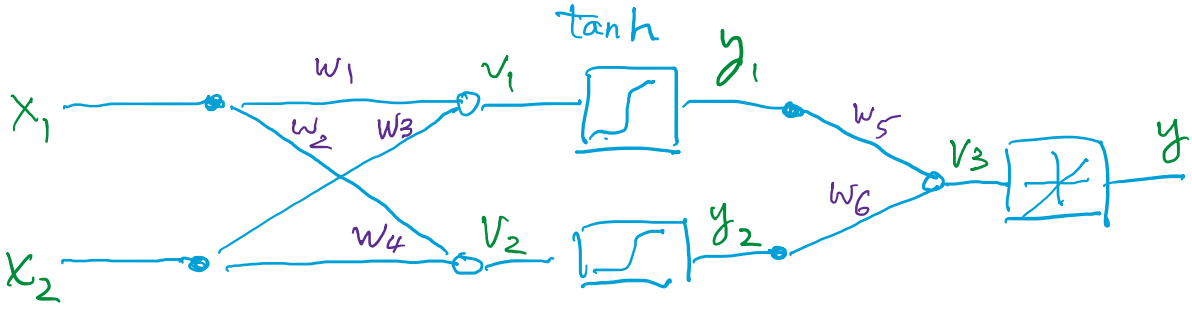

let $x = (x_1, x_2)$, $y = v_3$

you are given 2 training samples $\{x^1, y^1\}$ & $\{x^2, y^2\}$

$x^1 = (0.5, 0.7)$ $y^1 = 0.3$, $x^2 = (-0.2, 0.1)$, $y^2 = 0.1$

you are required to write the weight update equation and the weights $\{w_1, w_2, \ldots, w_6\}$ after 4 iteration (i.e., 2 sweeps through the training data set).

let $w_1(0) = -0.02$, $w_2(0) = -0.05$, $w_3(0) = 0.01$, $w_4(0) = 0.1$

$w_5(0) = 0.2$, $w_6(0) = -0.05$

hyper paramters

learning rate $\eta = 0.1$

a & b in tanh = $a = 1$ $b = 1$

batch size $N = 1$