CS 678 Deep Belief Network homework

Assume an RBM (Restricted Boltzmann machine) with 2 visible and 2 hidden nodes and initial weights W as below and bias weights (**b** and **c**) all 0. Do CD-1 and update the weights with the pattern .8, .2. When sampling for this problem, always go with the most probable possibility. Do sampling (rather than real valued updates) at all levels, except for the final weight update, where you should use the probability $Q(h_2=1|x_2)$ in the weight update. Assume a learning rate of .1. Remember to update the bias weights also.

$w_{x1,h1} = .6$
$w_{x1,h2} = .5$
$w_{x2,h1} = .4$
$w_{x2,h2} = -.1$