Q1

In this question we will run the back propagation algorithm manually, for the

given input X = (1, 2,−1) and an output Y = 0. Let the neural network N

be defined as follows:

• 3 inputs x1, x2, x3.

• Two hidden layers H(1),H(2) where both H(1) and H(2) contains 2 neurons.

The activation function of all hidden layers is RelU.

• An output layer with single output with identity function as activation.

• all the weights of the network are initialized to 1

Assuming the loss function is RSS,

input

Loss

RSS

ReLU

ReLU

output

Forward:

Back propagation