Sure, let’s calculate the backpropagation for one step.

First, let’s calculate the forward propagation:

1. Calculate the weighted sum for the hidden layer:
2. Apply the LreLU activation function:
   * (since )
   * (since )
3. Calculate the weighted sum for the output layer:
4. Apply the sigmoid activation function to get the predicted output:

1. Calculate the loss:

Now, let’s calculate the backpropagation:

(since )

(since )

Finally, let’s update the weights and biases using the chain rule and the learning rate ():

* (since )
* (since )

So, the updated weights and biases are , , and .