What do you get if you don't use a non-linearity such as sigmoid, tanh, or rectifier?

* Neural networks for regression, since the output can take on any value While it is a regression, it does not have the non-linear benefits of neural networks.
* Linear regression
* It doesn't change anything, it's still a neural network that can be used on non-linear problems.

X = [[1,2]] (1 sample, 2 dimensions)

input-to-hidden weights: W1 = [[1, 1], [1, 0]]

hidden-to-output weights: W2 = [[0, 1], [1, 1]]

hidden layer nonlinearity: tanh()

Calculate the output of the neural network, Y. Note that you must use softmax because W2 is 2x2.

* [[0.27, 0.73]]
* [[0.54, 0.46]]
* [0.27, 0.73]
* [[0.76, 1.76]]