Module 2.1

In class we created a neural network with 2 linear "splits" (yellow and green) followed by a final classification layer:

$$\text{lin}(x; w, b) = x_1 \times w_1 + x_2 \times w_2 + b$$
$$h_1 = \text{ReLU}(\text{lin}(x; w^0, b^0))$$
$$h_2 = \text{ReLU}(\text{lin}(x; w^1, b^1))$$
$$m(x_1, x_2) = \text{lin}(h; w, b)$$

Parameters:

$$w_1, w_2, w_1^0, w_2^0, w_1^1, w_2^1, b, b^0, b^1$$

This network has 9 parameters. There are 3 for the first split (yellow), 3 for the second split (green) and 3 for the final classification layer.

In practice, we can have as many of these "splits" as we would like. This is referred to as "hidden size". Each time we increase hidden size the dimension of the final classification layer goes up by one.

If we move from a hidden size of 2 to a hidden size of 6, how many parameters would the model above have?

1   1 point

Type your answer...