

# HW 2

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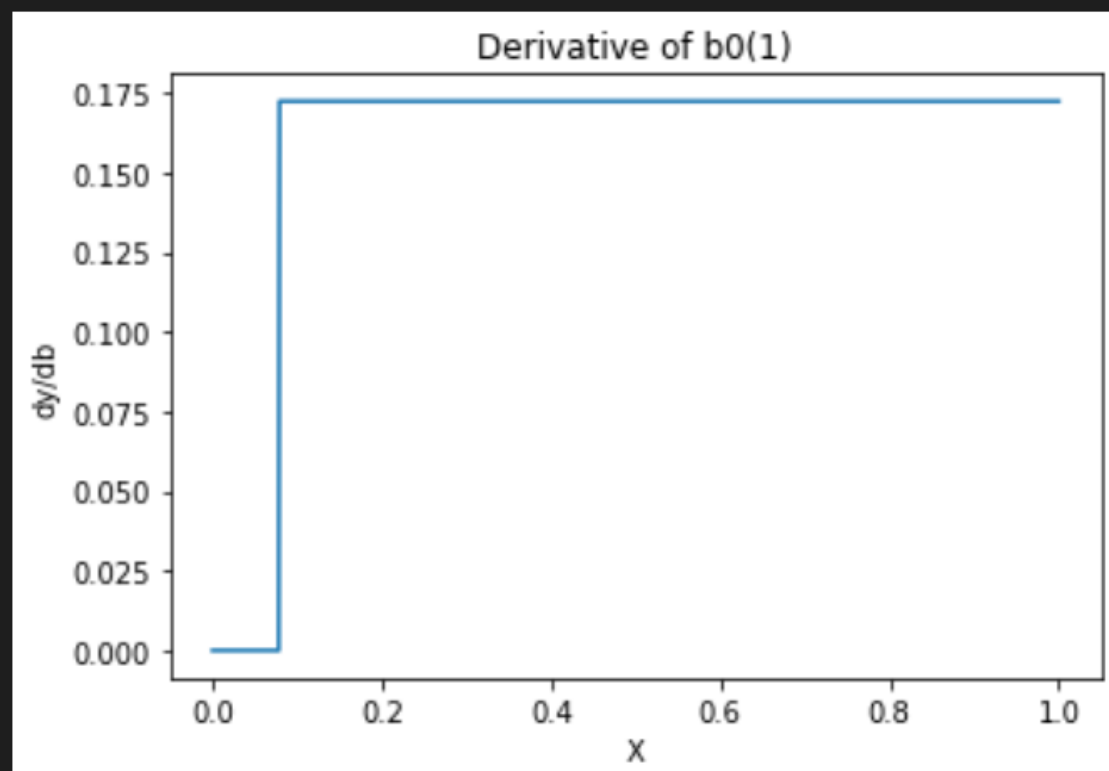
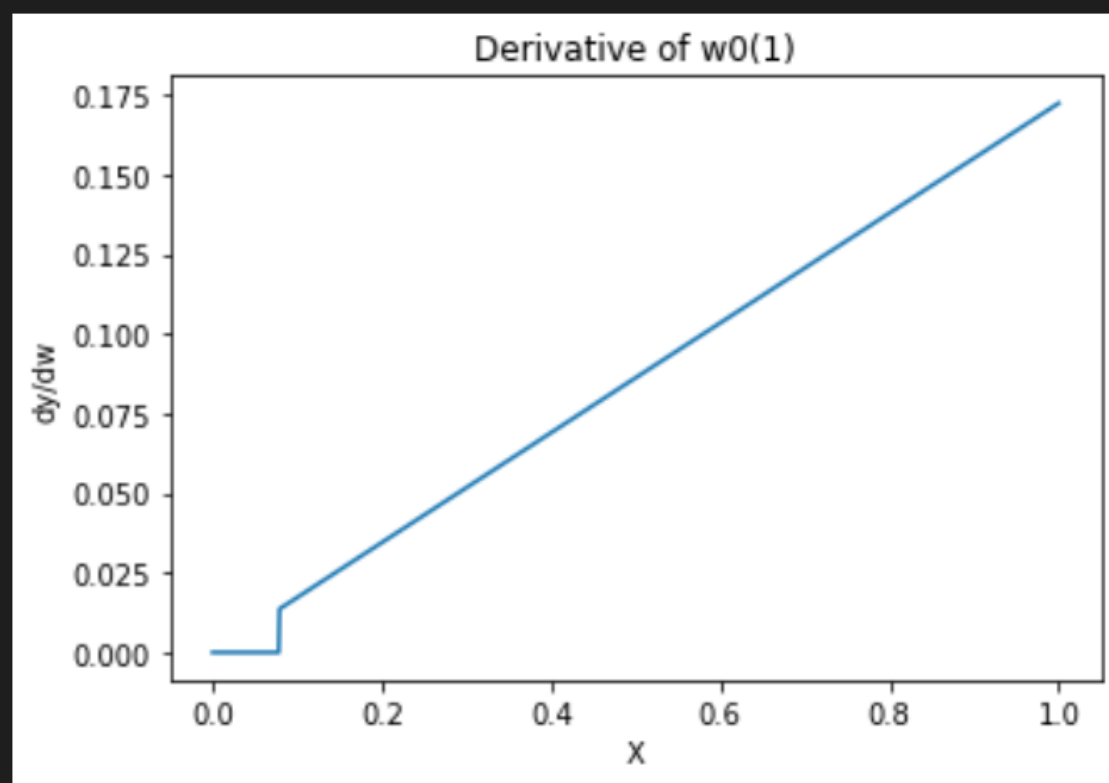
## Problem 3 Visualizing features

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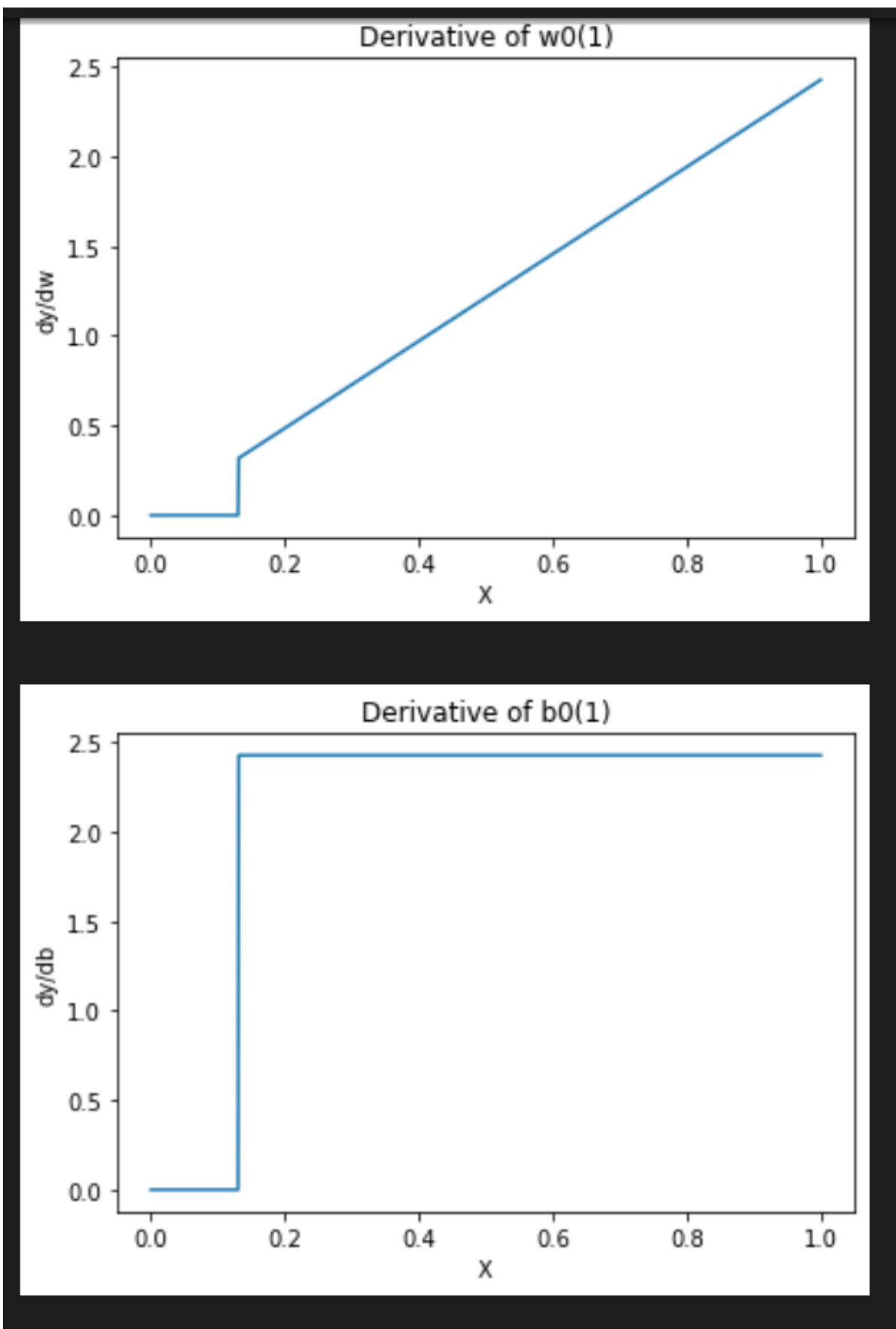
(a)

### Initialization:

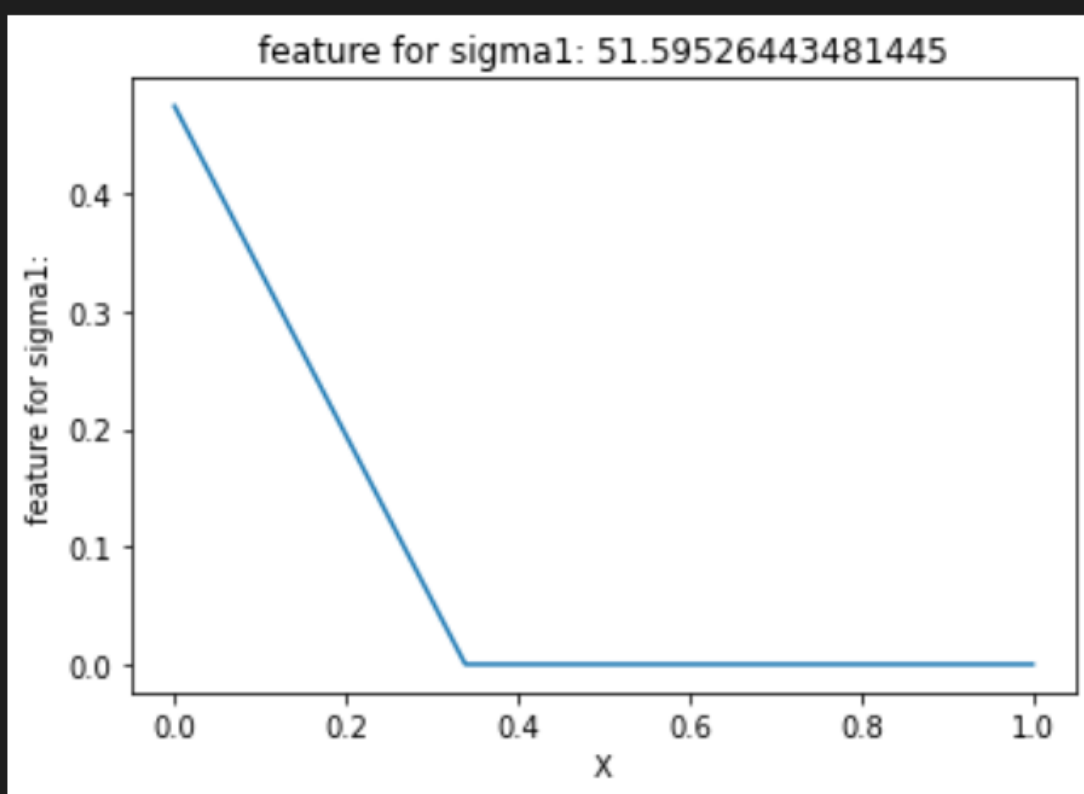
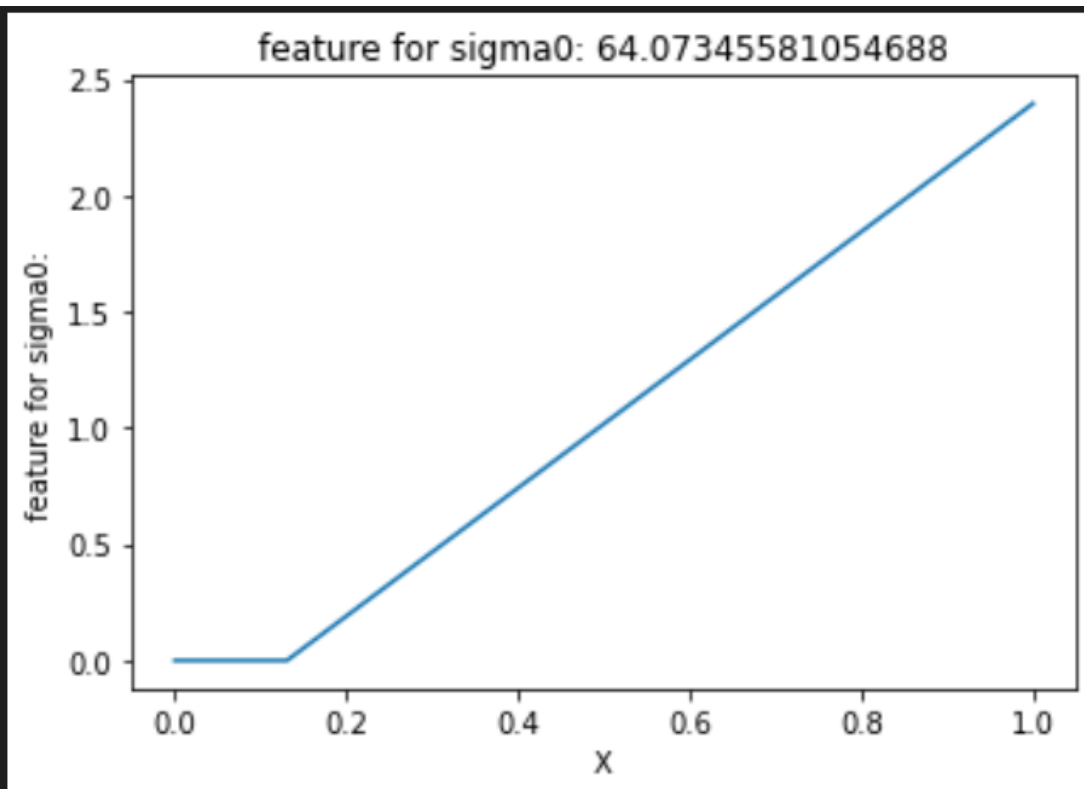
Since there are 10/20/40 elements of each  $W(1)$ , I only pick the one whose index is 0 and plot it.  
 $b(1)$  is the same as  $W(1)$ .

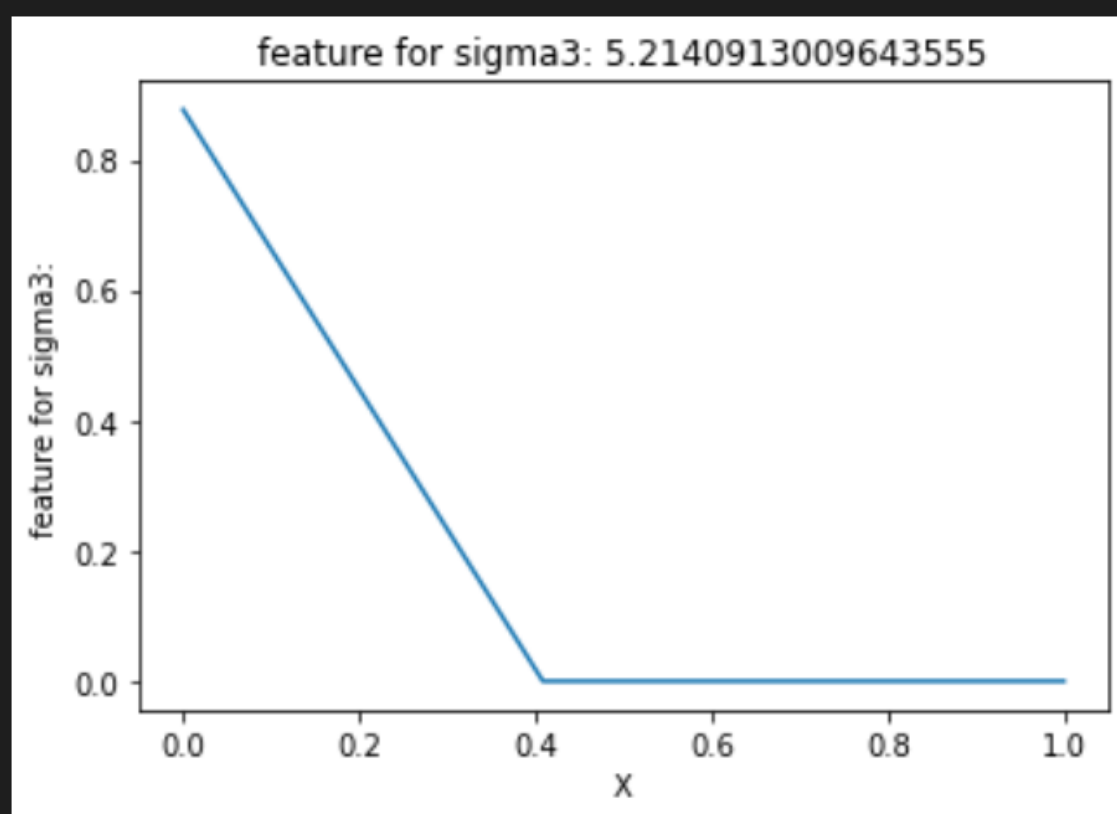
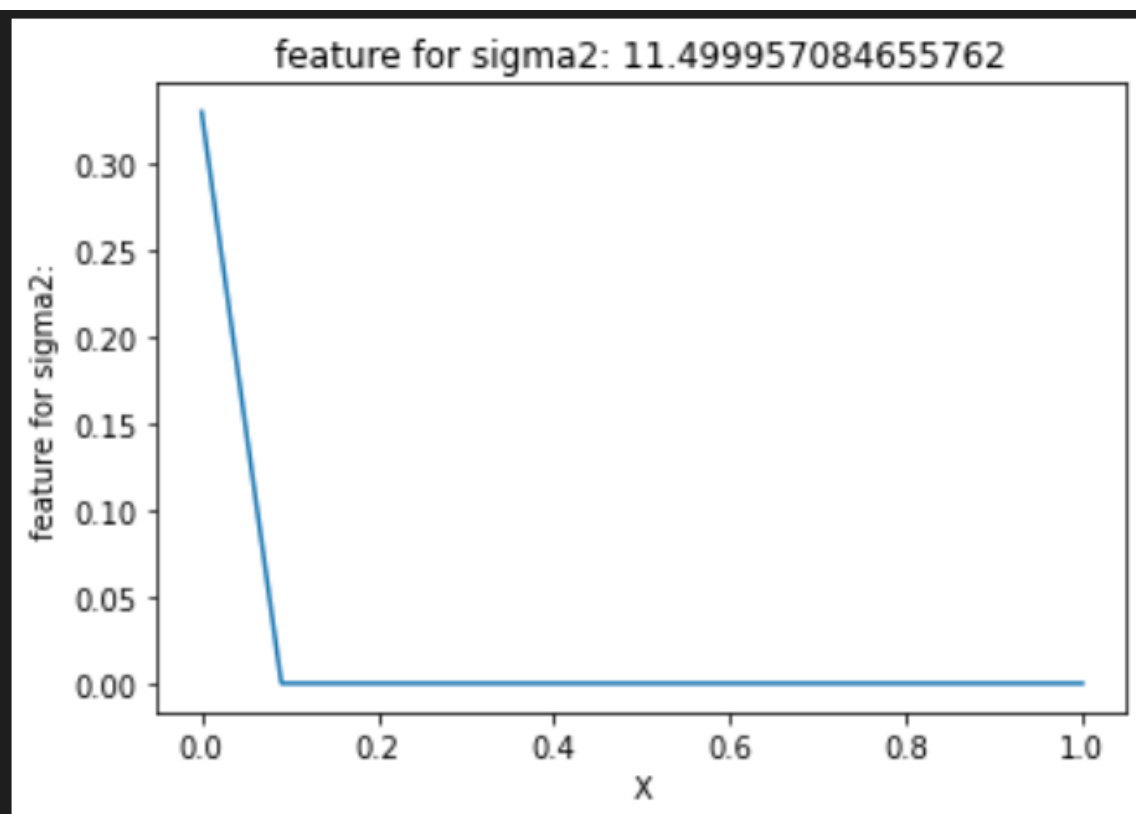


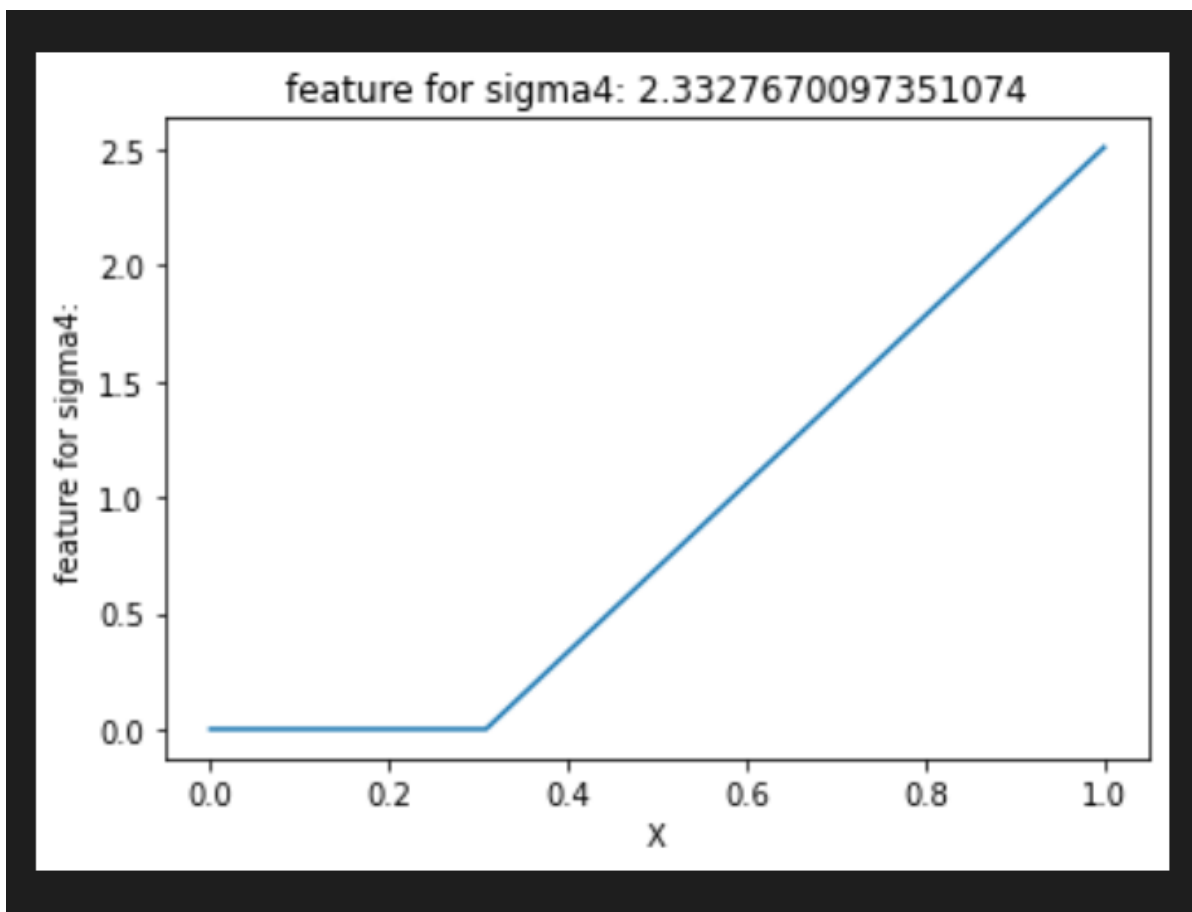
Trained:



(b)



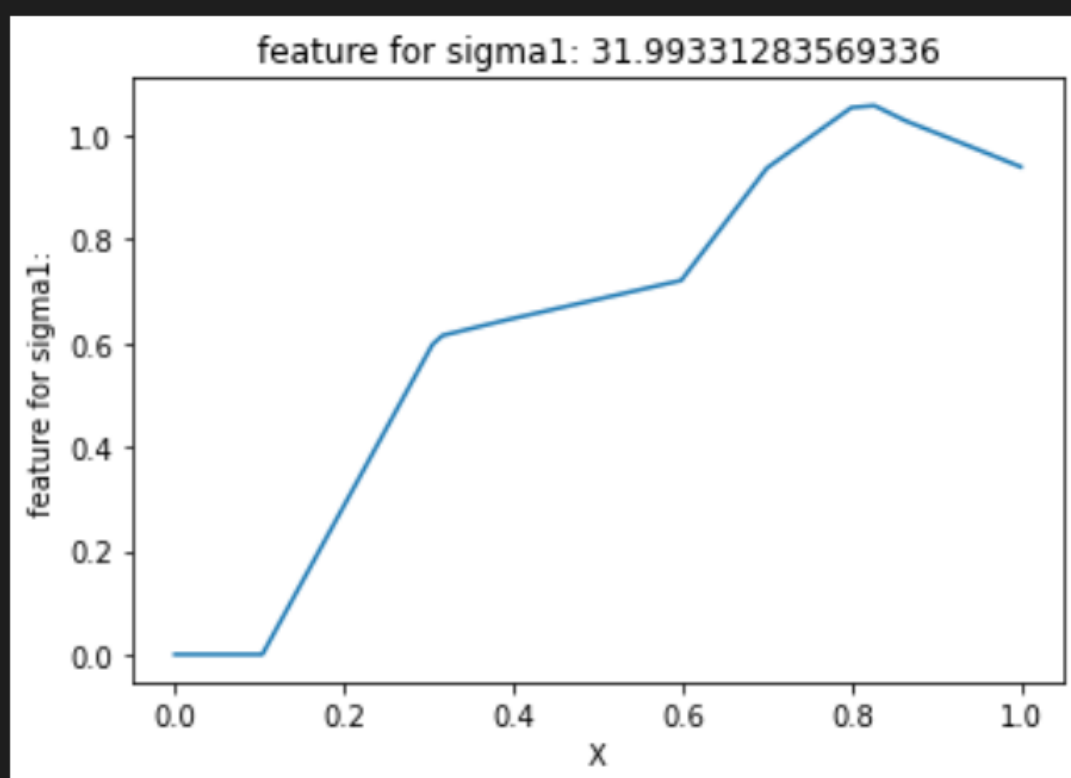
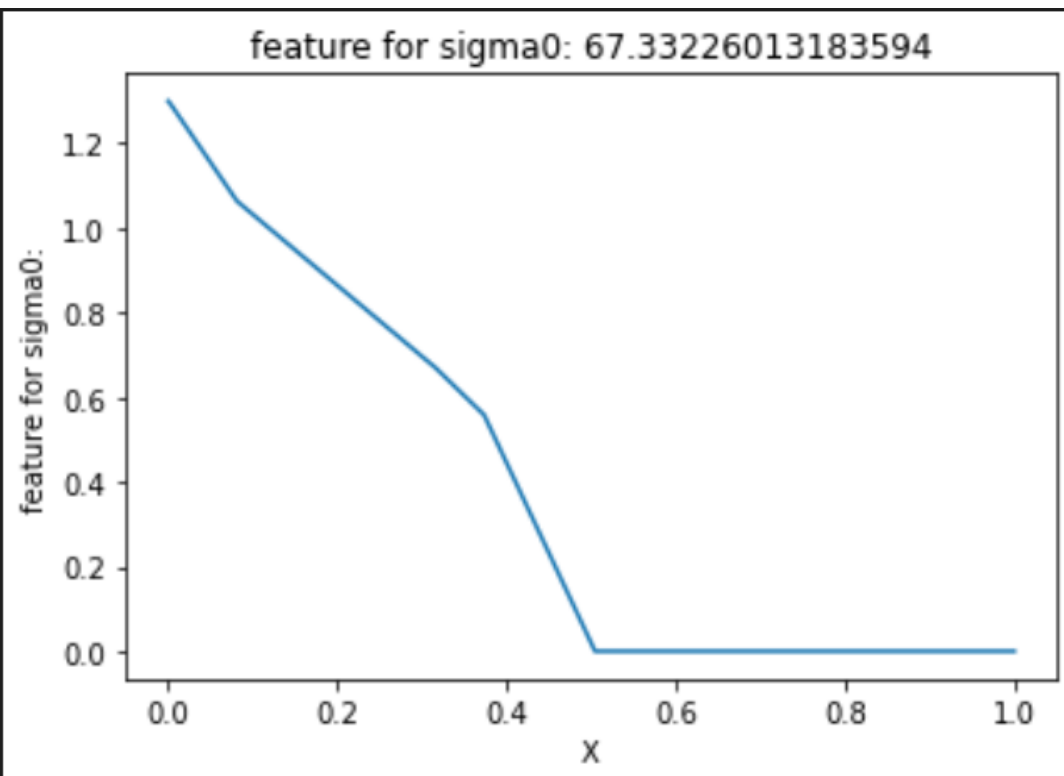


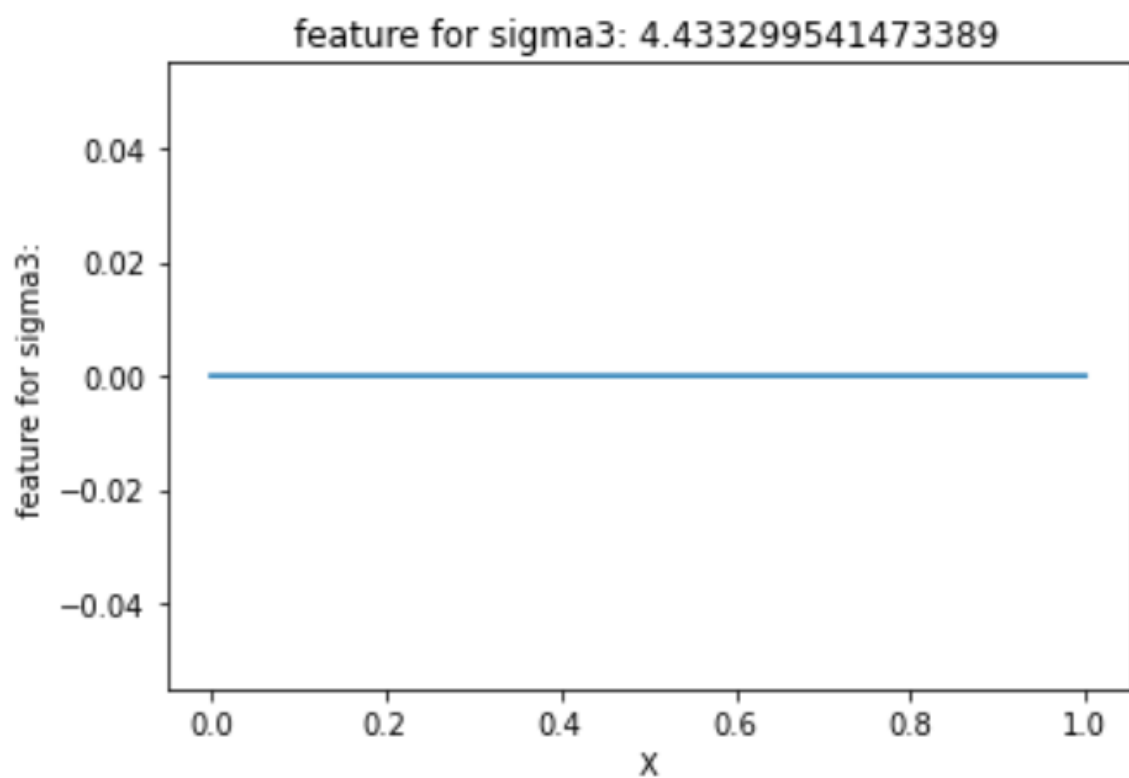
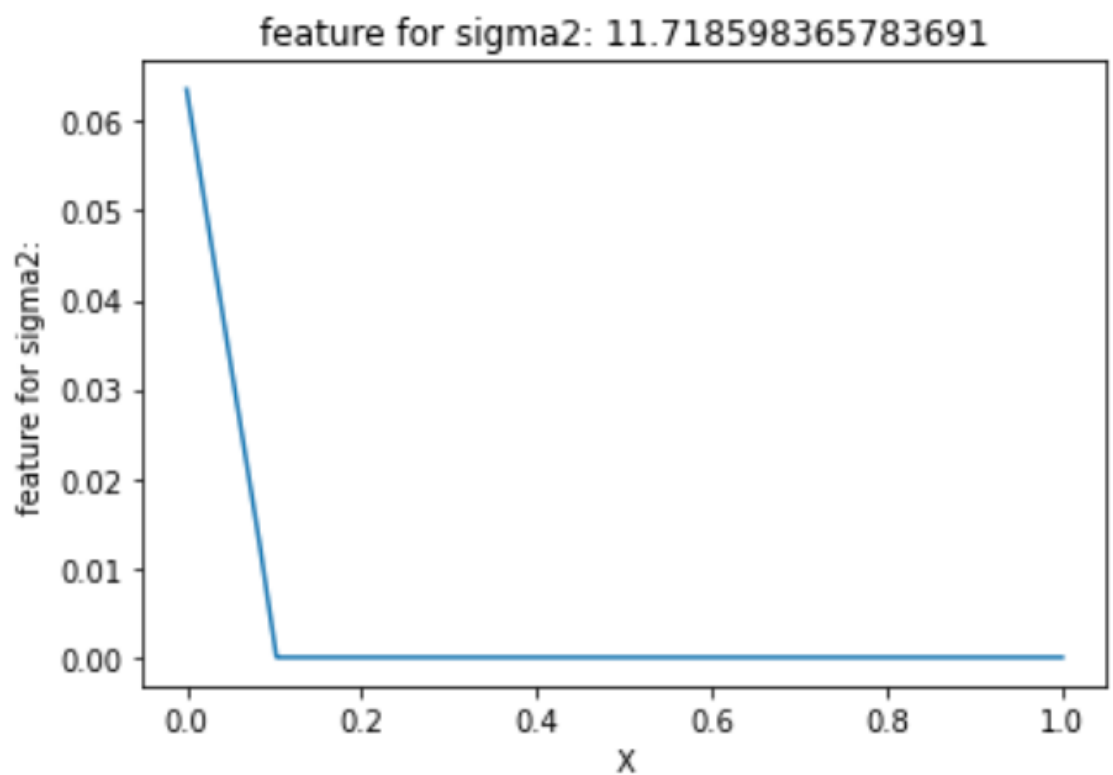


(c)

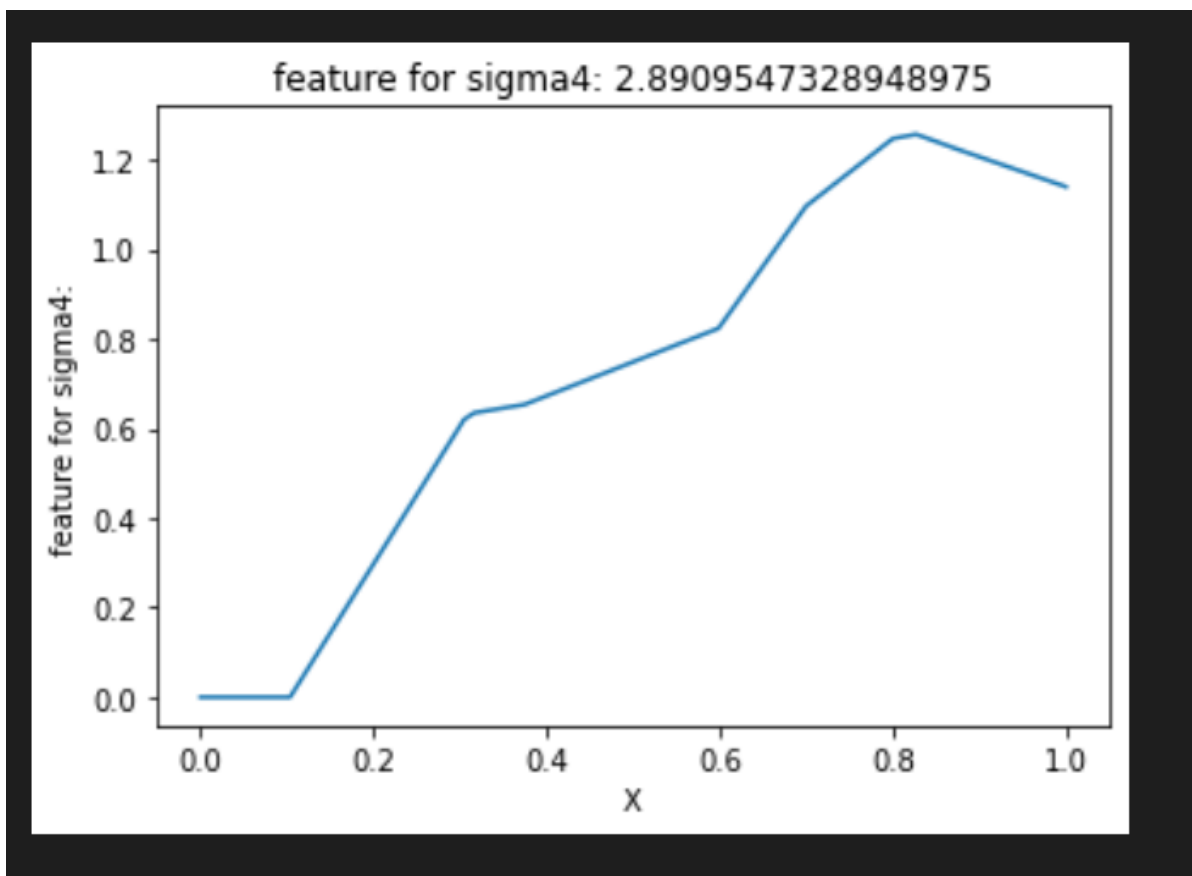
Principle features do change more than others.

(d)









(Not sure)