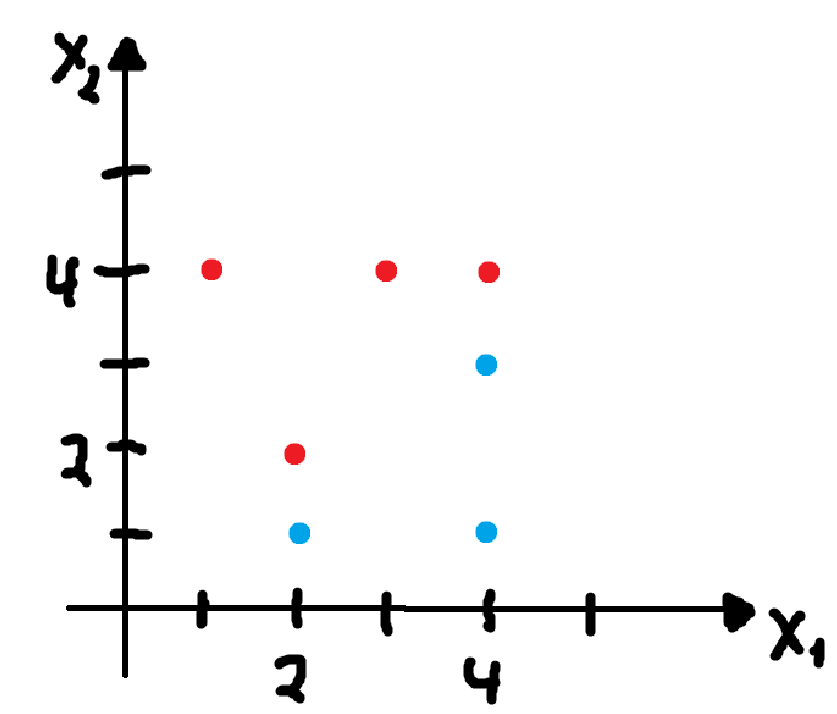
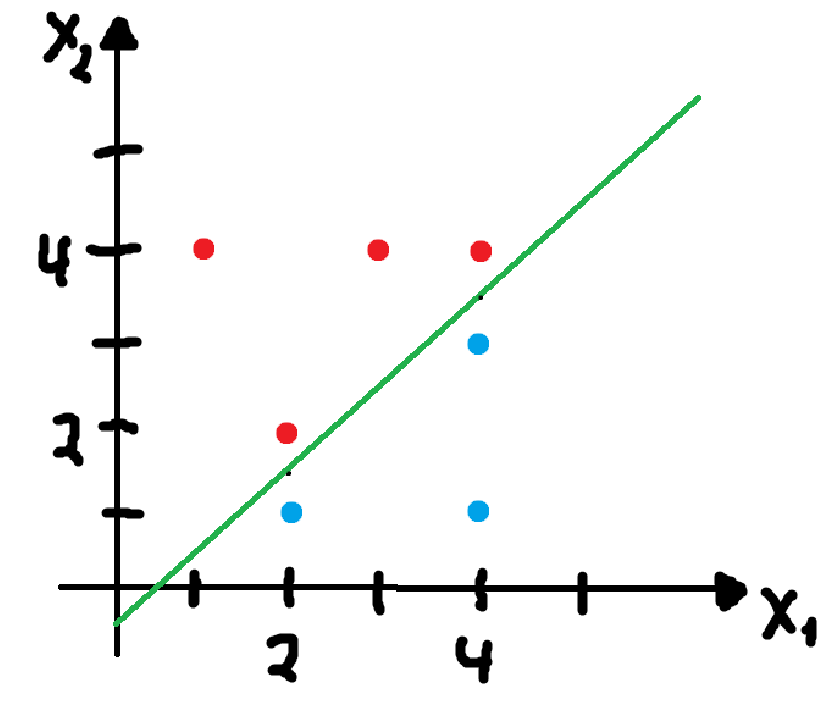
SVM – **Theory. Ex.3**

(a)



(b)

Hyperplane:

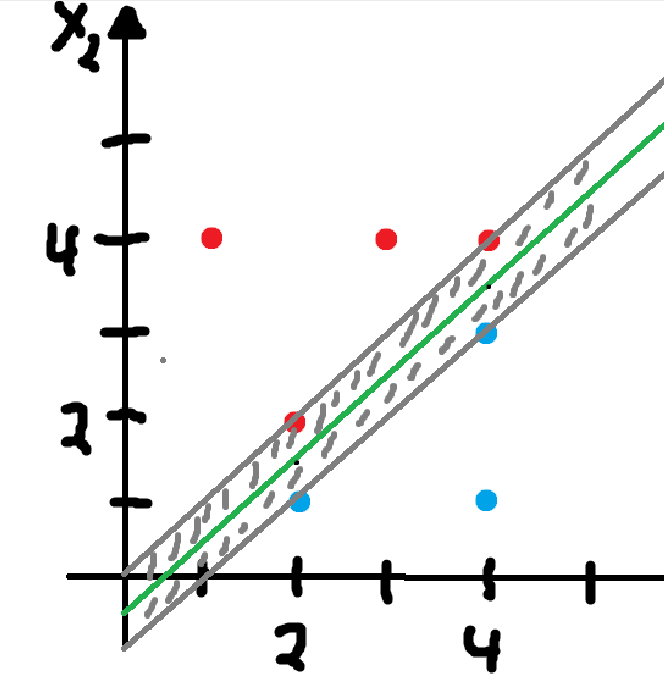


(c)

The classification rule is: Classify to Red if and blue otherwise.

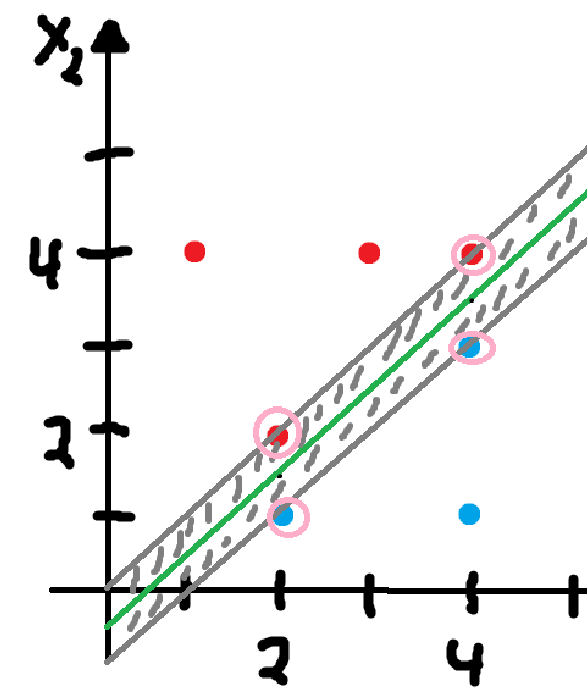
(d)

The margin is:



(e)

The support vectors are:

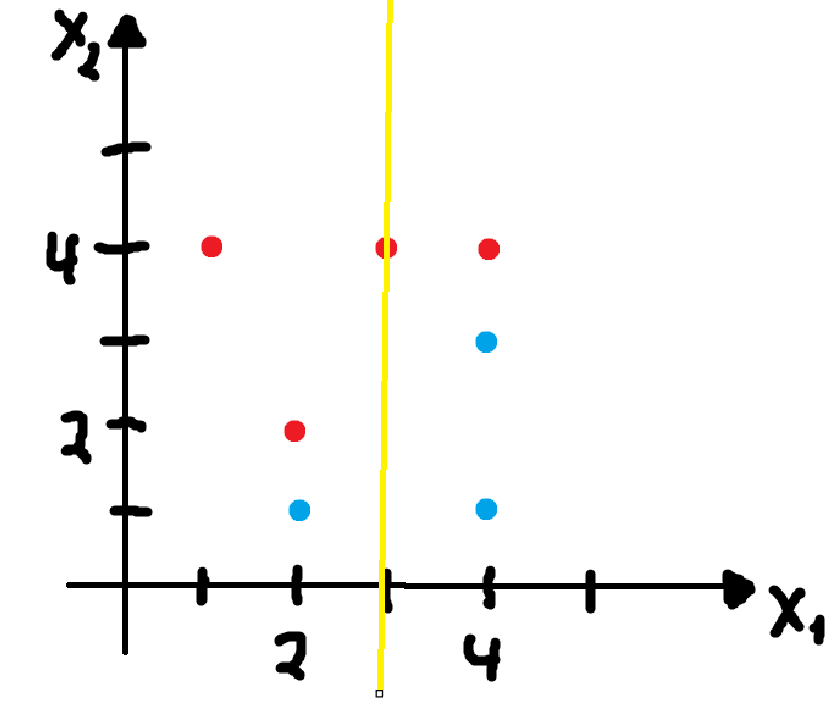


(f)

Slight movement of the bottom would not effect the the maximal margin because that point does not contribute to the margin calculation.

(g)

This is not an optimal separating hyperplane:



Equation:

(h)

This dataset cannot be separated by a hyperplane.

