

EXAMPLE 1

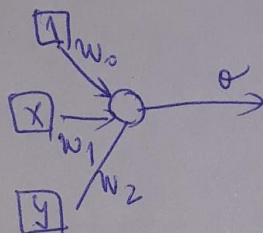
Let us consider the following examples

Example	X	Y	Class
1	0,25	0,25	+
2	1	0,5	-
3	0,5	1	-
4	0,25	0,5	+
5	1	1	-

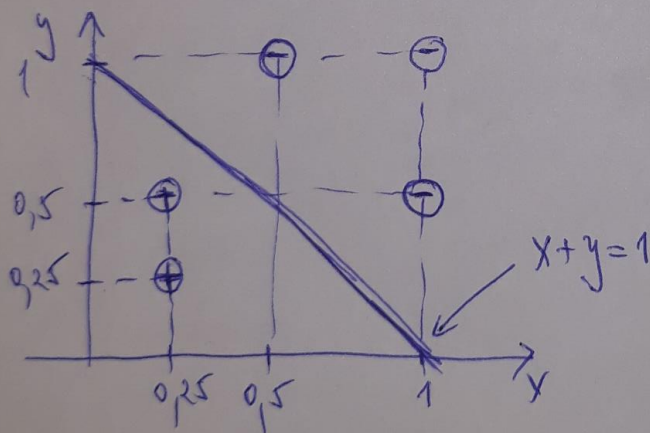
where + stands for a positive example and - for a negative example.

Construct a perceptron representing the above target concept.

Solution



$$\sigma = \begin{cases} +1 & w_0 + w_1x + w_2y > 0 \\ -1 & \text{otherwise} \end{cases}$$



$$\Rightarrow \sigma = \begin{cases} +1 & -x-y+1 > 0 \\ -1 & \text{otherwise} \end{cases}$$

\Rightarrow the perceptron is

