C = 10

2021_02_03_Problema1

i	1	2	3	4	5
x_1	1	1	1	1	1
x_2	3	4	2	5	1
c	-1	+1	+1	-1	+1
α_i^*	**10** (>0)	**10** (>0)	**3.56** (>0, <C)	**3.56** (>0, <C)	0

FDL:

$$\Theta^* = C_1\alpha_1^* X_1 + C_2\alpha_2^* X_2 + C_3\alpha_3^* X_3 + C_4\alpha_4^* X_4$$

$$= \left(\cancel{(-1.10.1} + \cancel{1.10.1} + \cancel{1.3,56.1} + \cancel{-1.3,56.1}\right),$$

$$(-1.10.3 + 1.10.4 + 1.3,56.2 + -1.3,56.5)$$

$$= (0, -0,68)$$

~~(X3 primer vector SV)~~

vector soporte x_4: $\alpha_4^* < C \cdot 1 \cdot \alpha_4^* > 0$

$$\Theta_0^* = C_4 - \Theta^{*t} x_4 = -1 - (0 + -0,68 \cdot 5) = 2,4$$

Ecuación frontera (hiperplano separador):

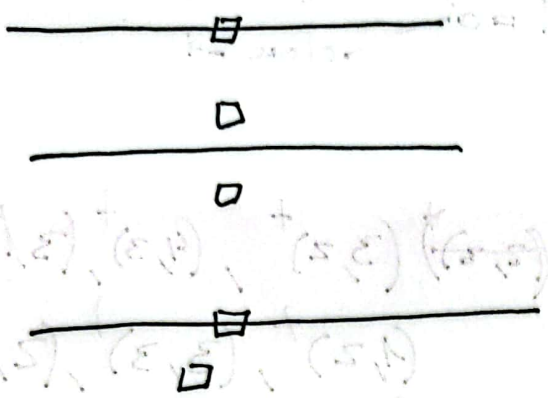
$$-0,68x_2 + 2,4 = 0$$

Ecuación Margenes → $-0,68x_2 + 2,4 = -1$

Margen $\Rightarrow \frac{2}{\|\Theta\|}$

(2021_02_03_P1)

Vectores soporte: $\nu = (1,3)^t, (1,4)^t, (1,2)^t, (1,5)^t$



clasificación de $(1, 3,5)^t$

$(-0,68 \cdot 3,5) + 2,4 = 0,055 \longrightarrow > 0$

Pertenece a la clase +1