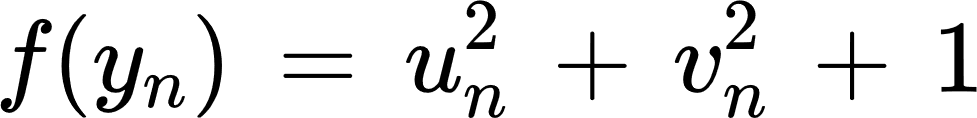
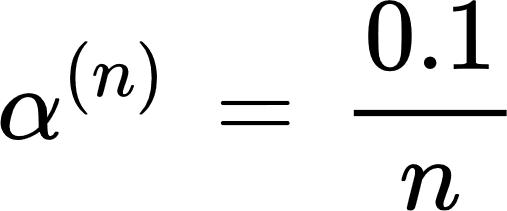
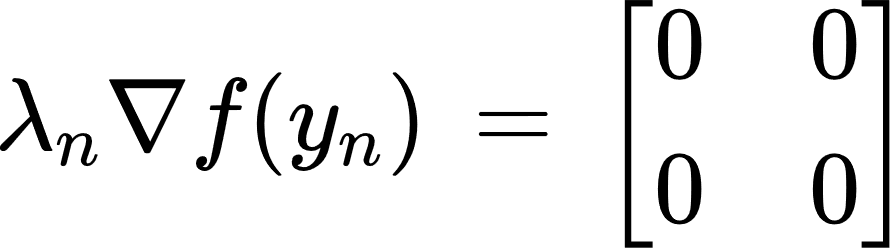
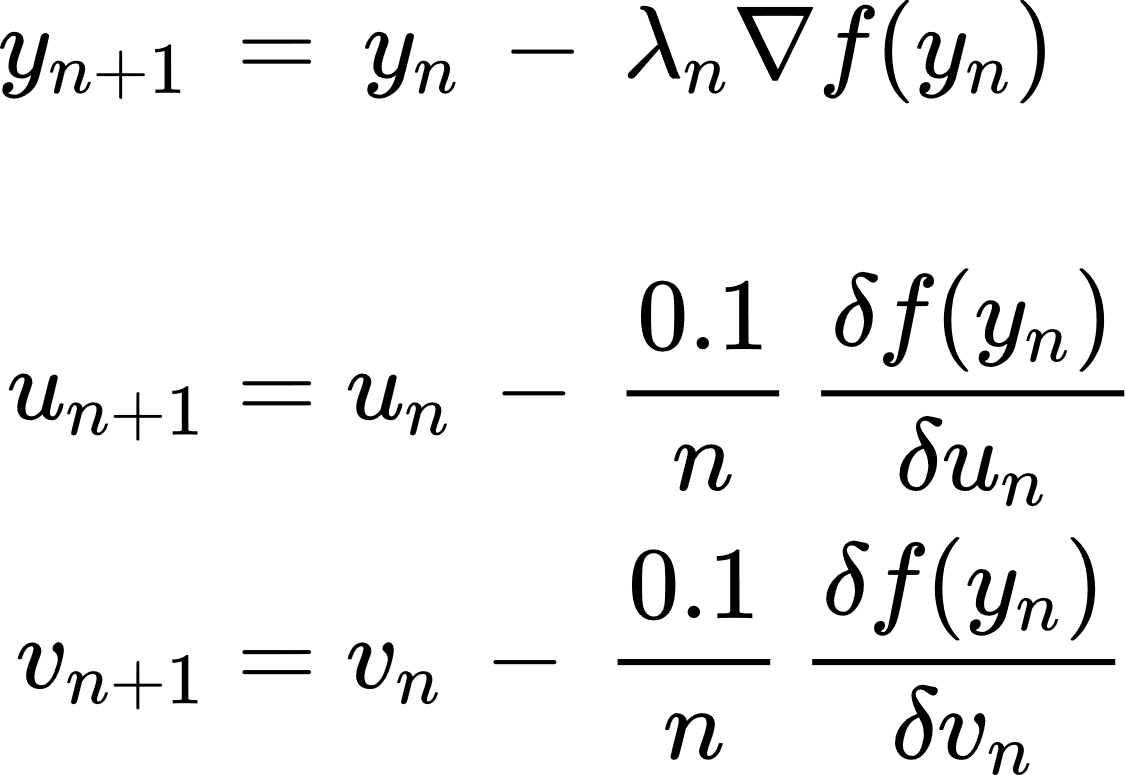
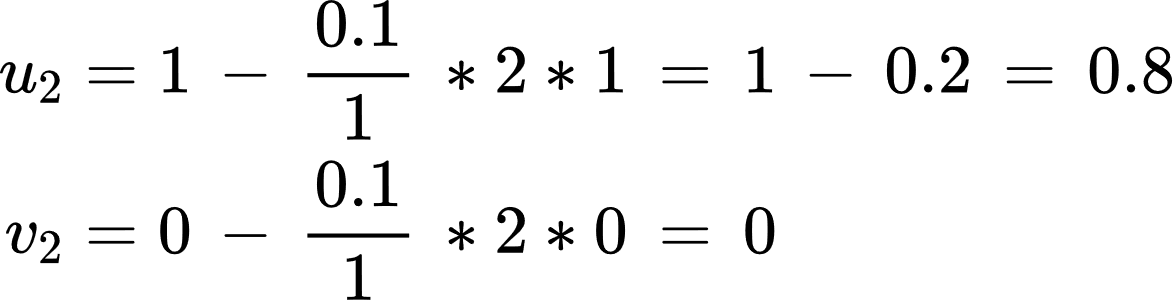
## Exercice 1 : Algorithme de descente du gradient

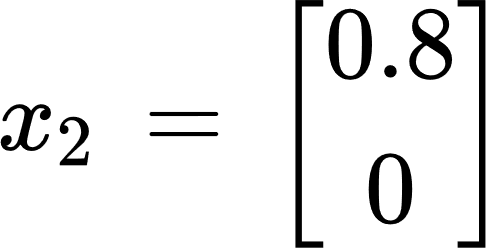


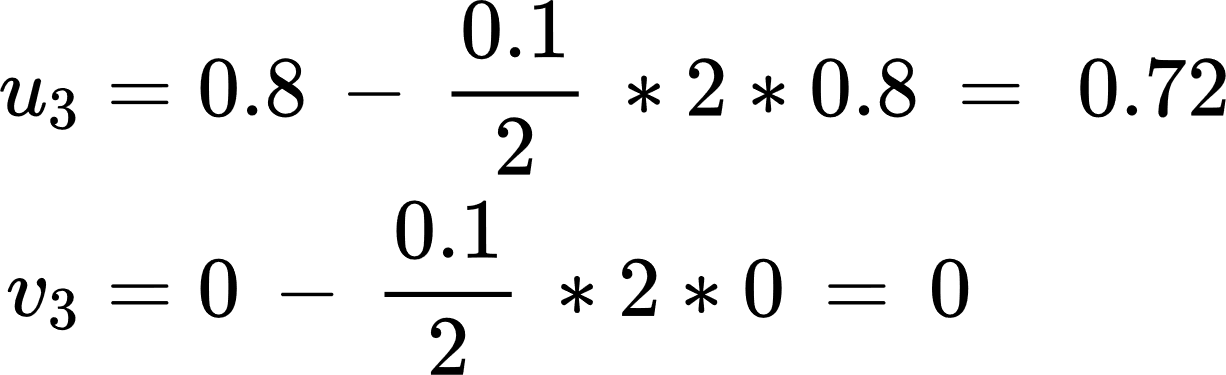


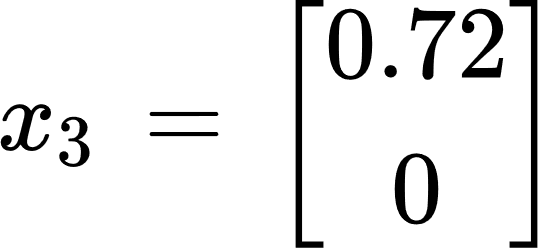


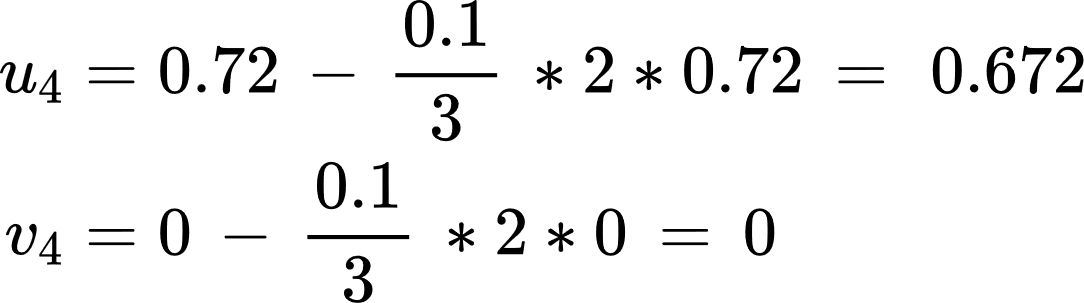


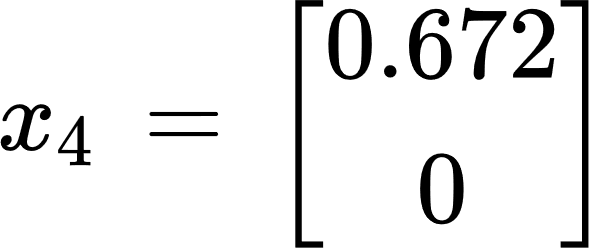






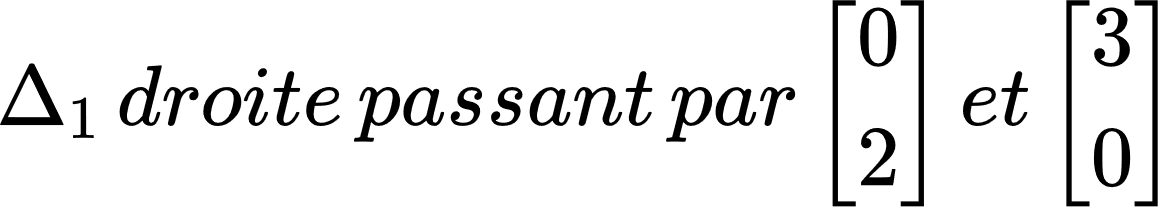


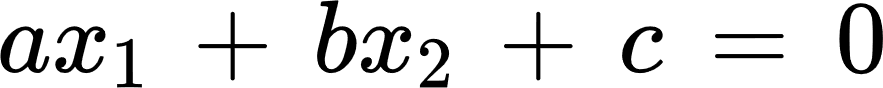


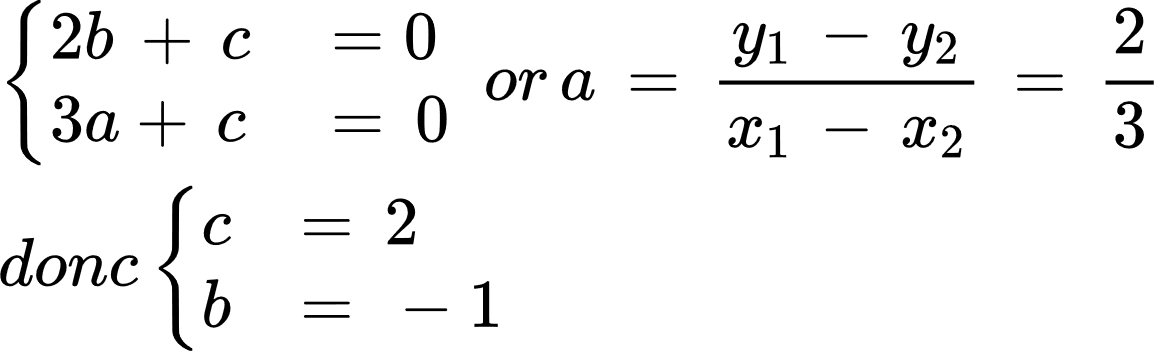


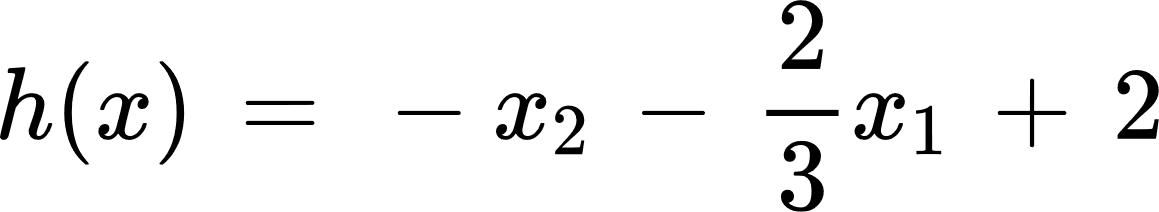
## Exercice 2 : Hyperplan s ́eparateur

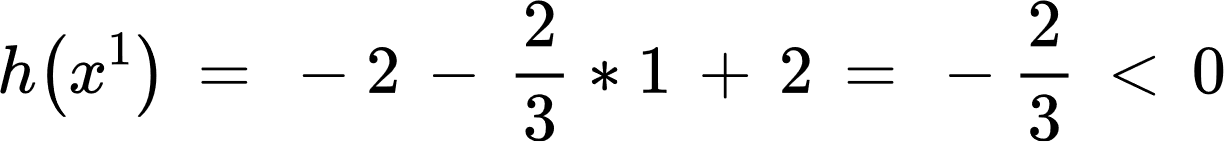
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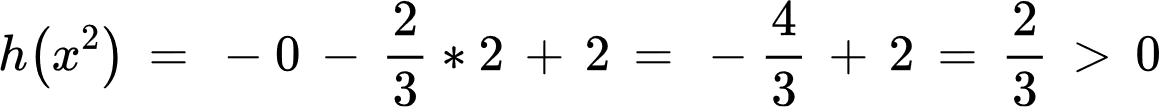


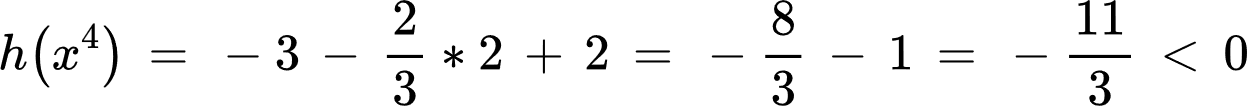
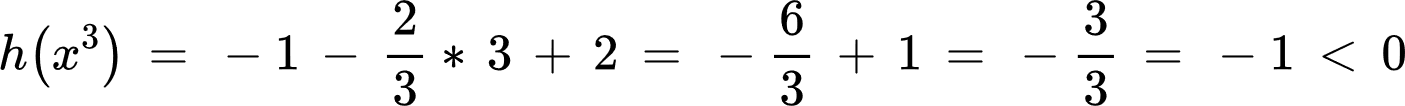


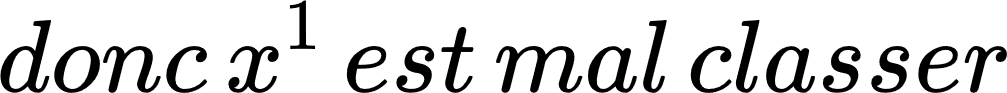


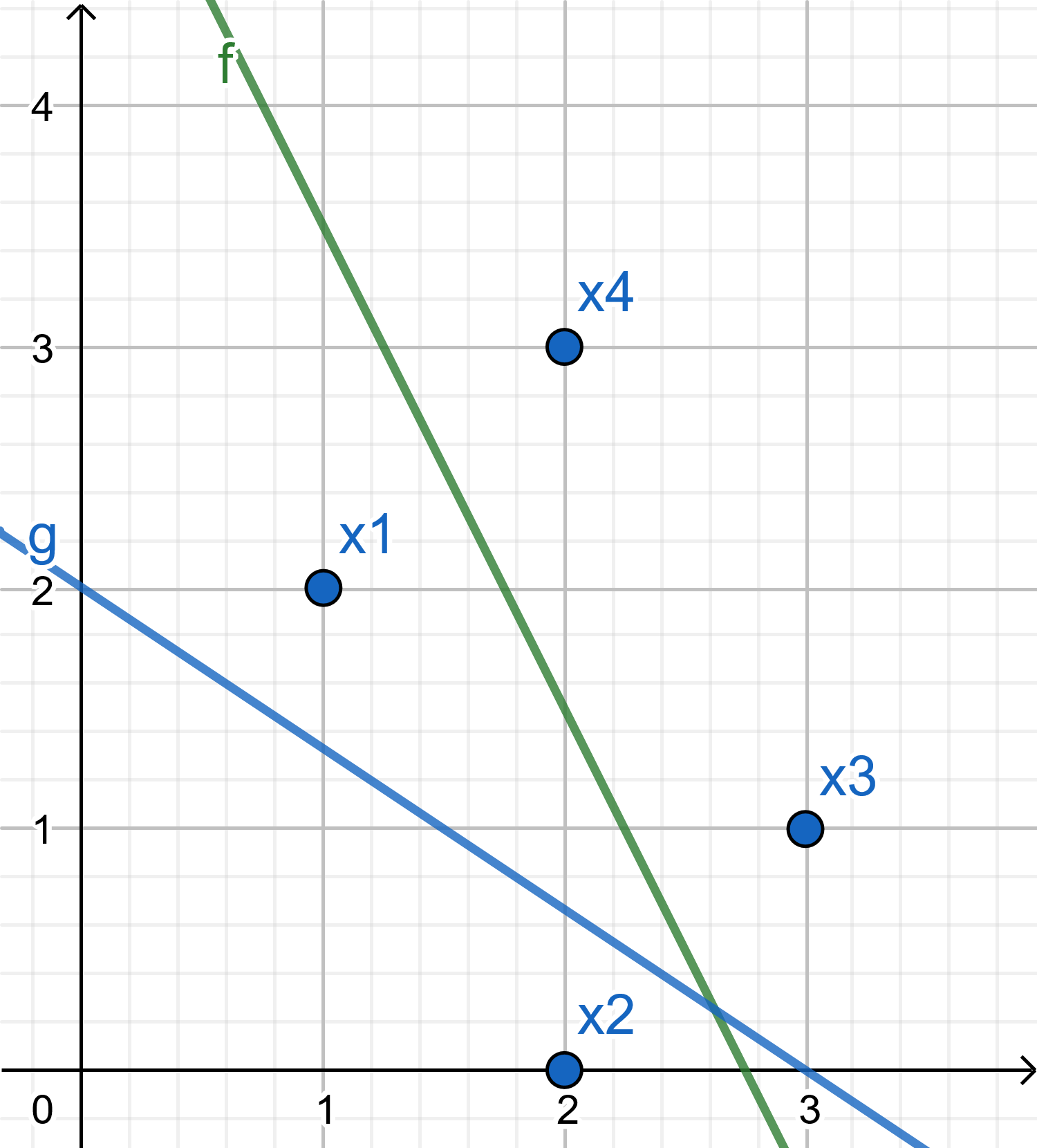






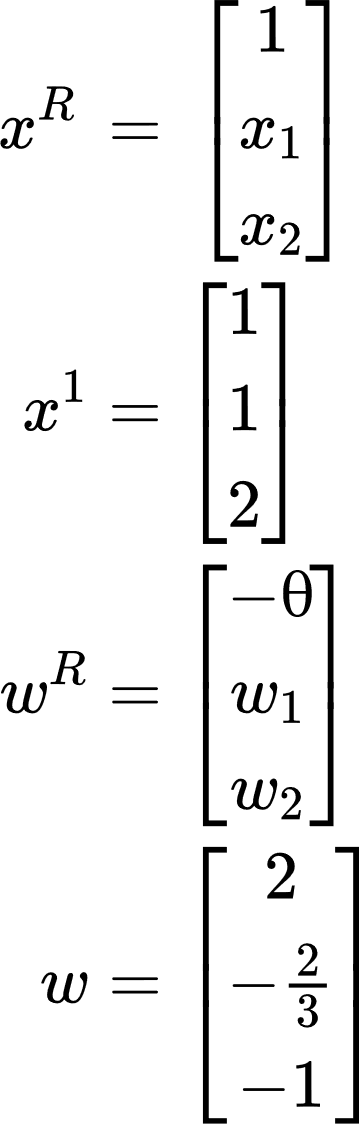


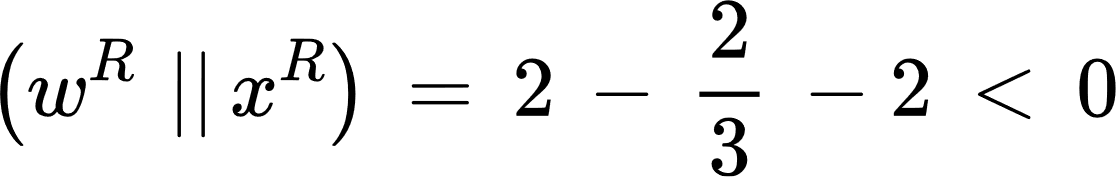


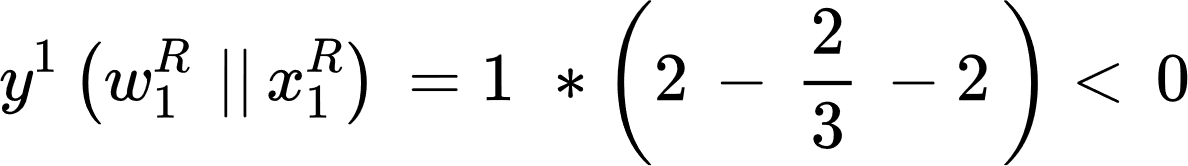


On définit un x “augmenté” (on adjoint 1 comme première coordonnée)

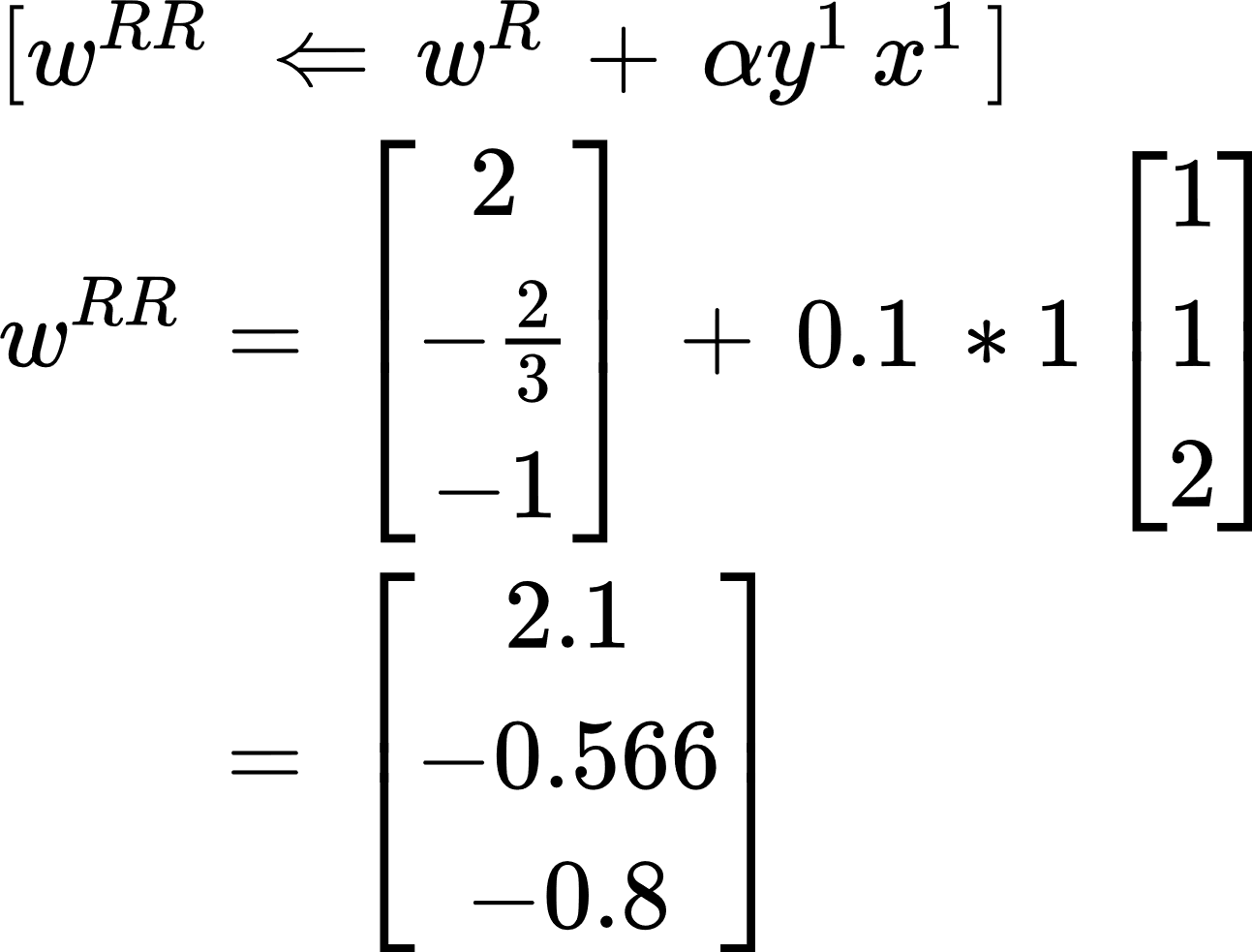
et un w “augmenté” (on adjoint -θ comme première coordonnée)

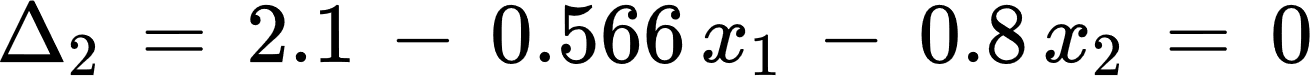






Donc nous mettons à jour les points:



Donc 

en (1, 2)

