1 / 4

[illegible]

$$w_1 * \text{income} + w_2 * \text{age} > 0$$

→ (+ve)

Classification

at training

↳ w1 w2 w0

[0.7, 0.8] 3

01

new data

$$m = -\frac{a}{b}$$

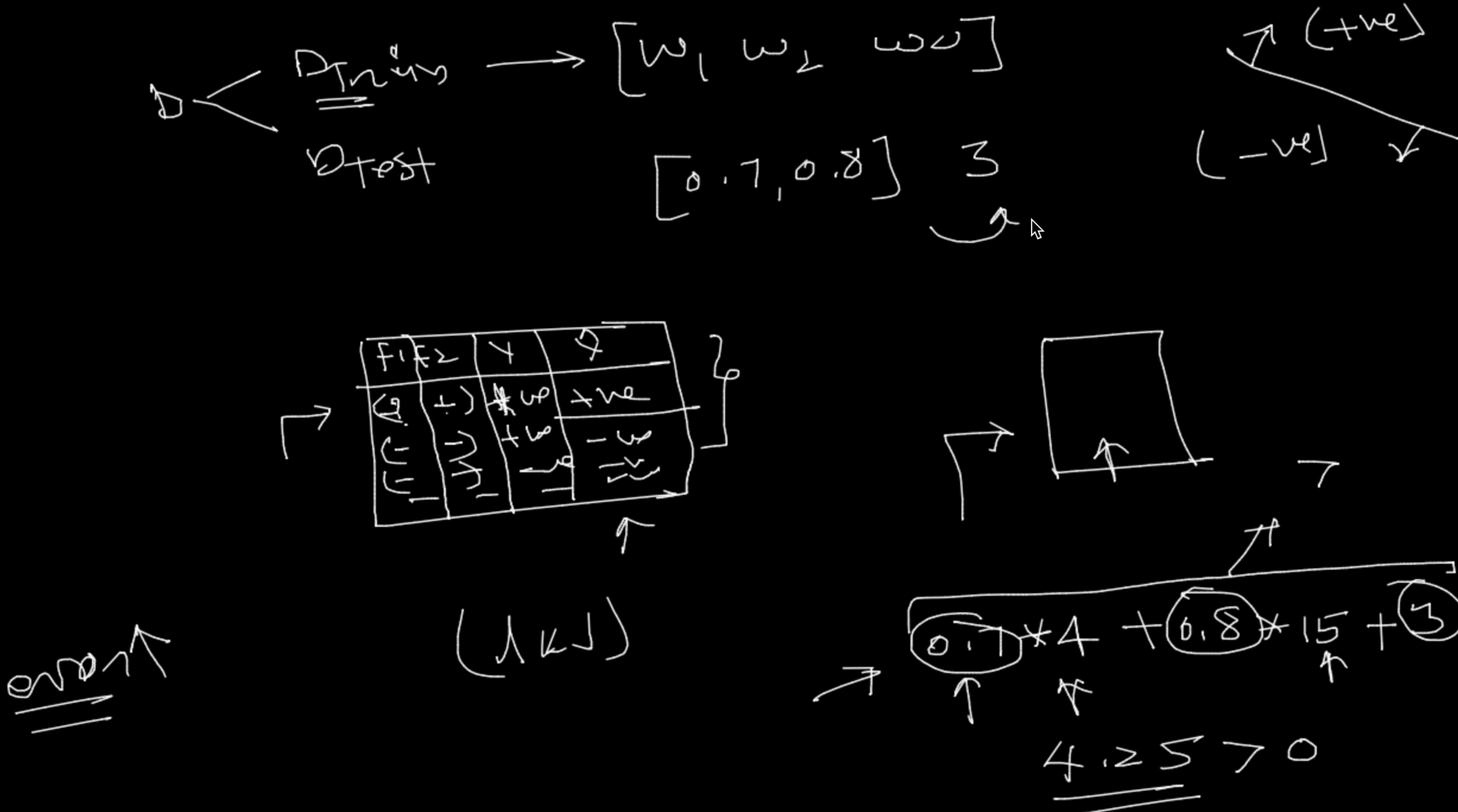
← $ax + by + c = 0$

$$by = -ax - c$$

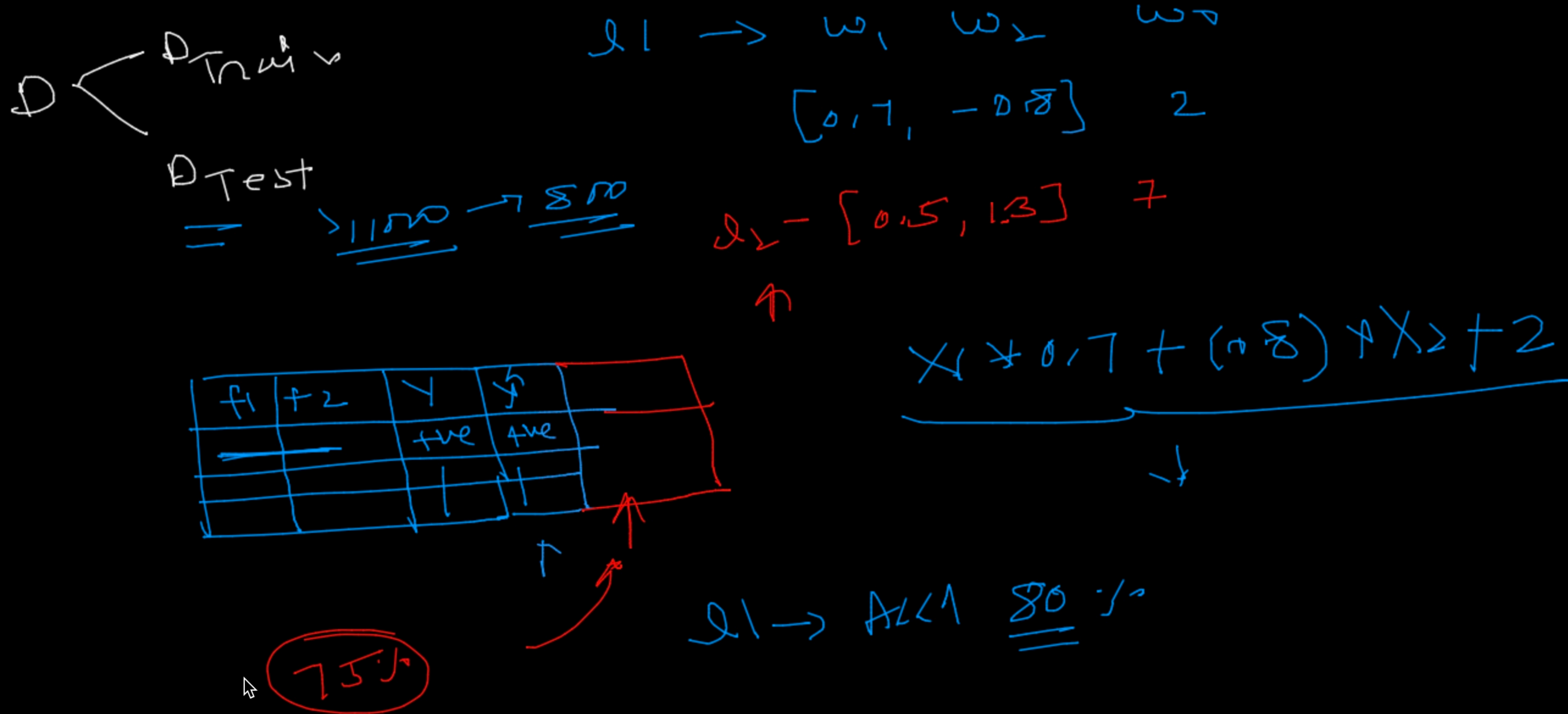
$$\rightarrow y = \left(-\frac{a}{b}\right)x - \frac{c}{b}$$

$y = mx + c$ ①

3 parameters



2 / 4


D
D Train
D Test
1100 → 800
l1 → w1 w2 w0
[0.7, -0.8] 2
l2 - [0.5, 1.3] 7
X1 * 0.7 + (-0.8) * X2 + 2
f1 f2 y ŷ
+ve +ve
l1 → Acc 80%
75%

3 / 3


D
Train
Test
Red
240
π1
π2
π3
distance
sum of distance
max(π1, π2)
276
4 / 5

w^* which → $\max \left(\sum_{i=1}^{n} y\, w^T x_i \right)$

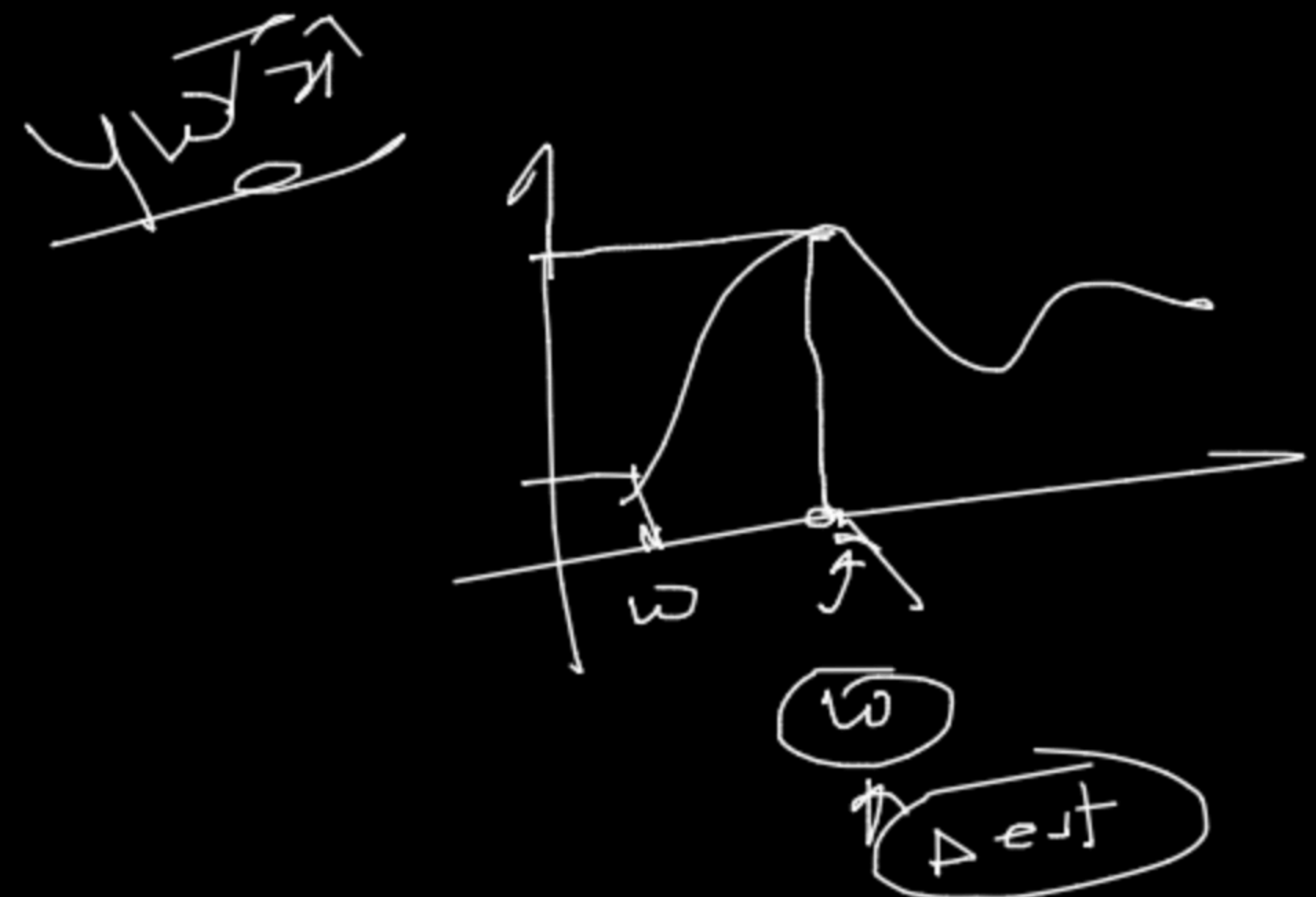
optimal 'w'

D_{Train}

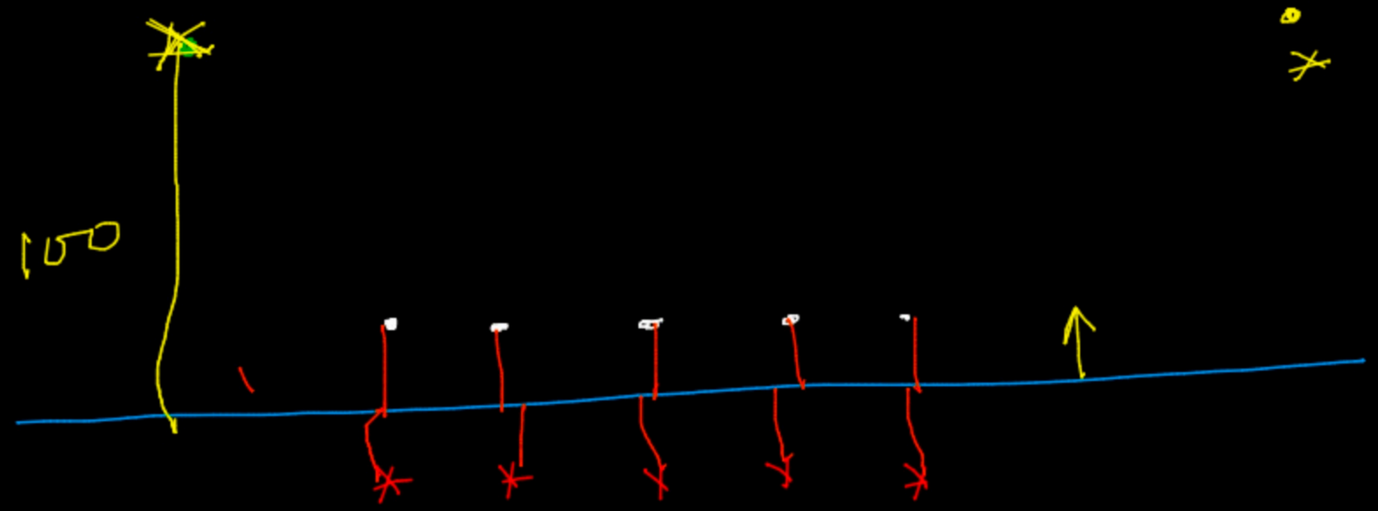
D_{Train}

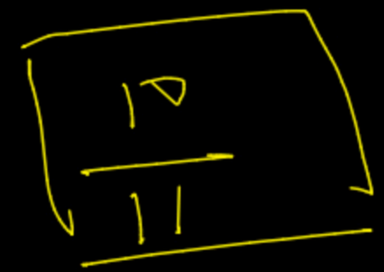
to find

optimisation problem



Cursor selected



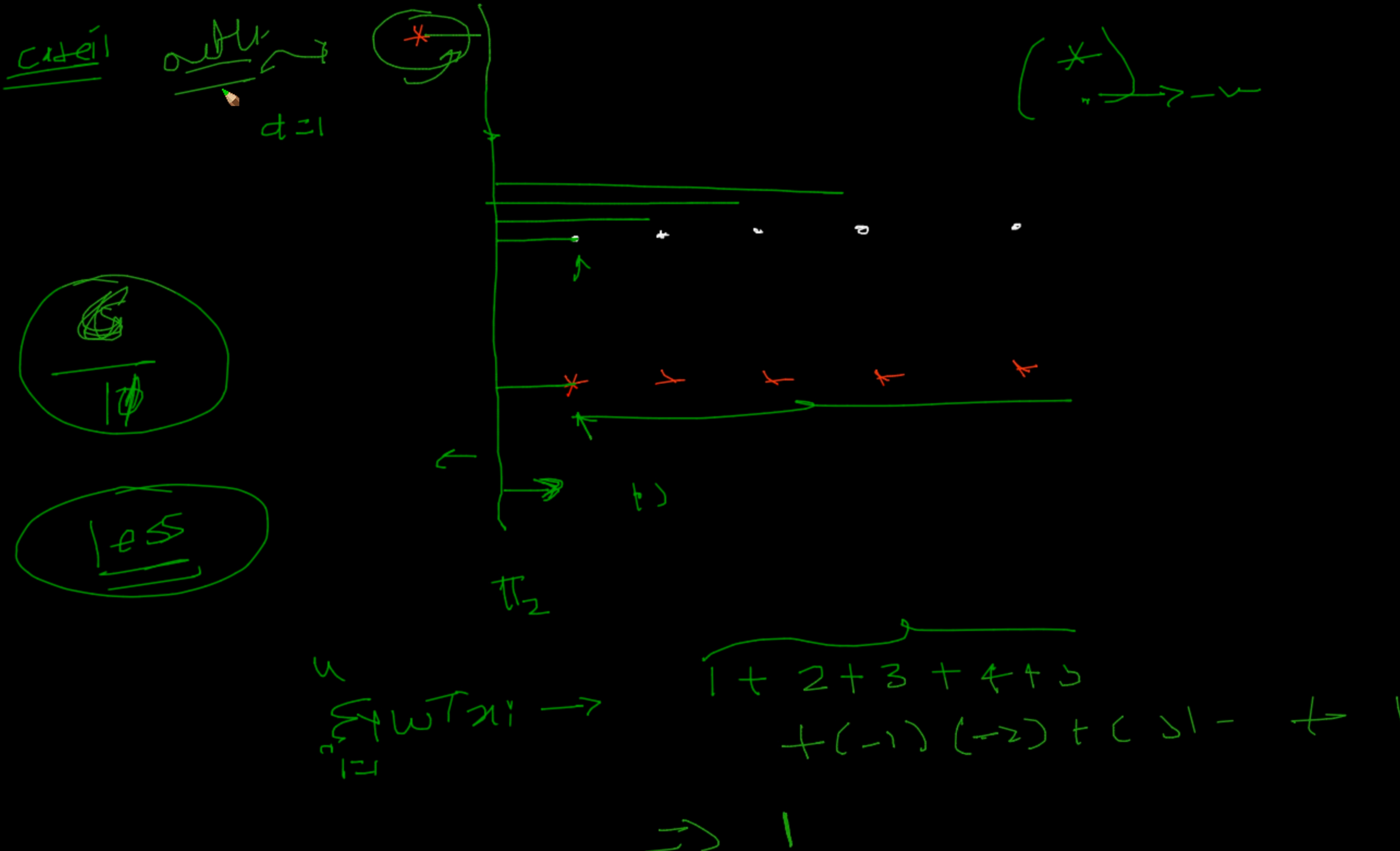


Case 1 →

$$\sum_{i=1}^{n} y_i \underbrace{w^T x_i}$$

$$= \underbrace{1+1+1+1+1+\overbrace{(-w)(-1)}^{+1}+ - - -}_{10 + (-w)(100)}$$

$$\leq -90$$



d=1
less