

$$200 = 0$$

$$300 = 1$$

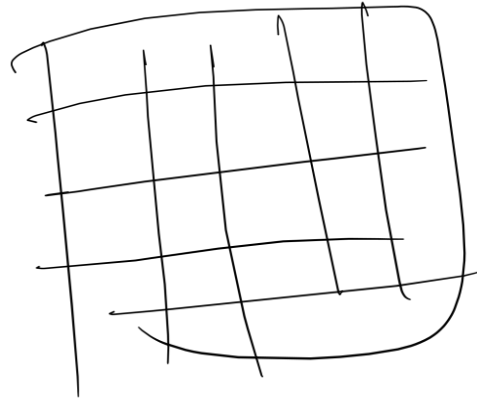
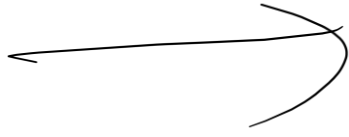
//

df. corr ( ) find VS Target

Multicollinearity



EDA



→ no null  
→ int/float

~~model = Linear Regression()~~  
~~model.fit(X\_train, y\_train)~~  
~~model.predict(X\_test)~~

Hand-drawn diagram of a neural network layer. A large rounded rectangle contains a horizontal bar with circles inside, representing nodes. Above the bar are labels  $x_1$ ,  $x_2$ ,  $x_3$ , ...,  $x_n$ . To the right is a vertical bar with a thick horizontal line at the top, representing a bias or output node.

# Linear Reg

Logistic  
Reg

A hand-drawn diagram illustrating a sequence of three boxes, labeled 10, 11, and 12, connected by arrows. Above the first box (10) is a circled 'X', and above the second box (11) is a circled '1'. The third box (12) is partially obscured by a large, scribbled-out mark.

Supervised	Unsupervised ✓
------------	----------------

Target	
--------	--

↳ Linear Regression

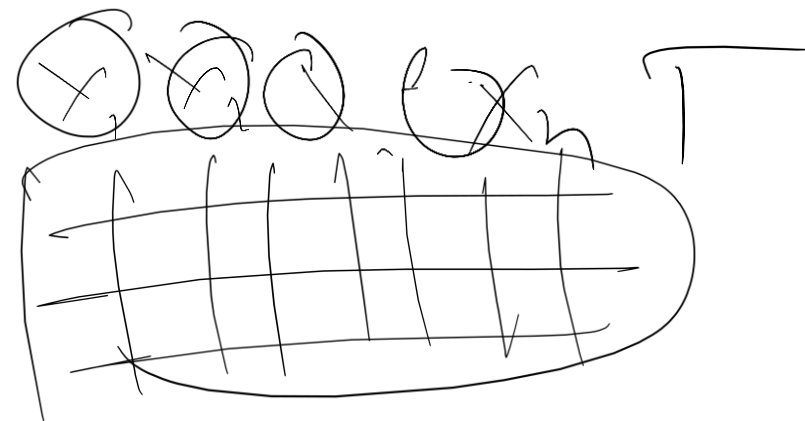
↳ Logistic Regression

↳ KNN

No target
-----------

⇒ ✓

Linear Regression:



$X_1, X_2, \dots, X_n$

Coeff

$\beta_0$

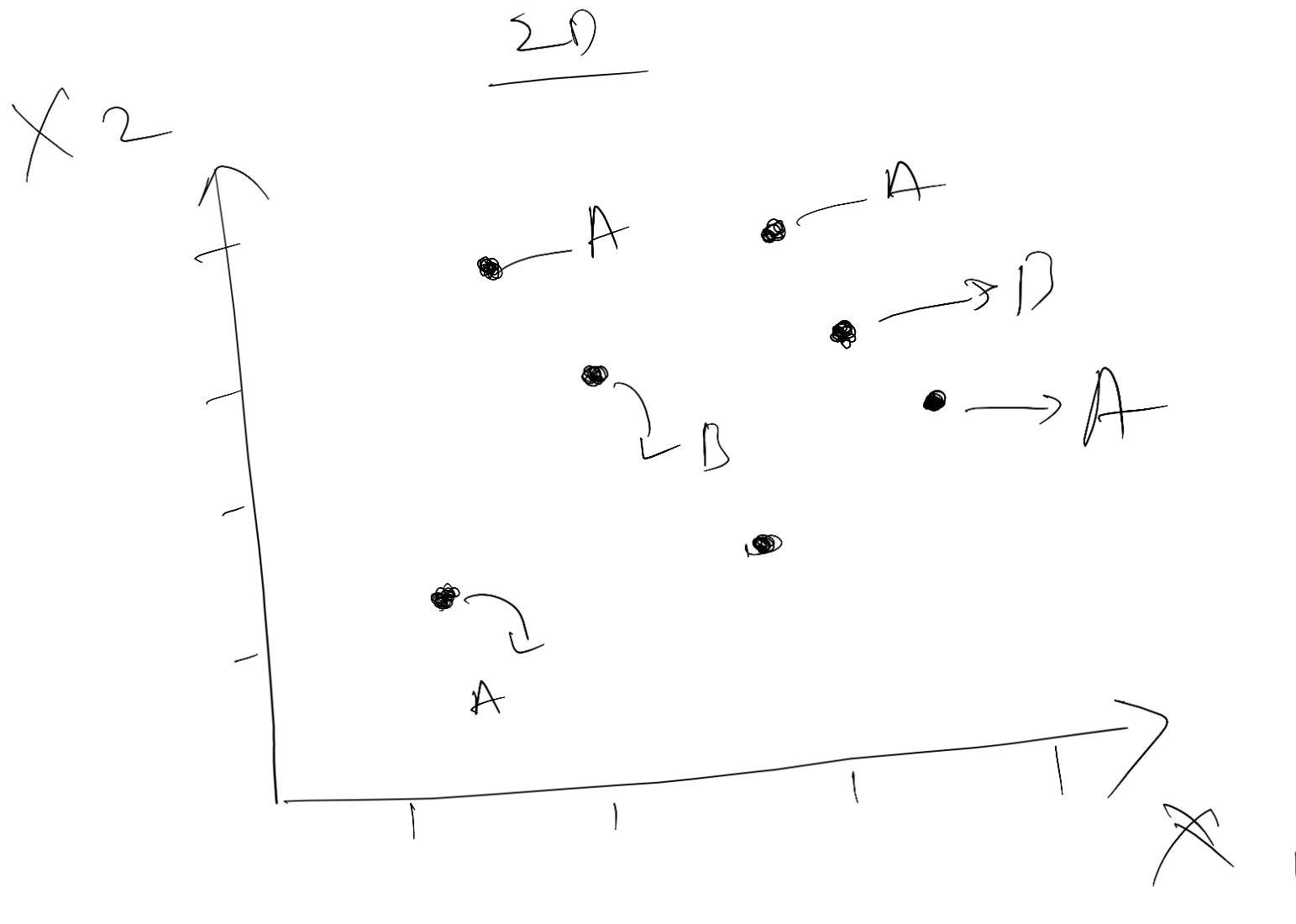
Intercept

$mx + b$
$\beta_0 + \beta_1 x$

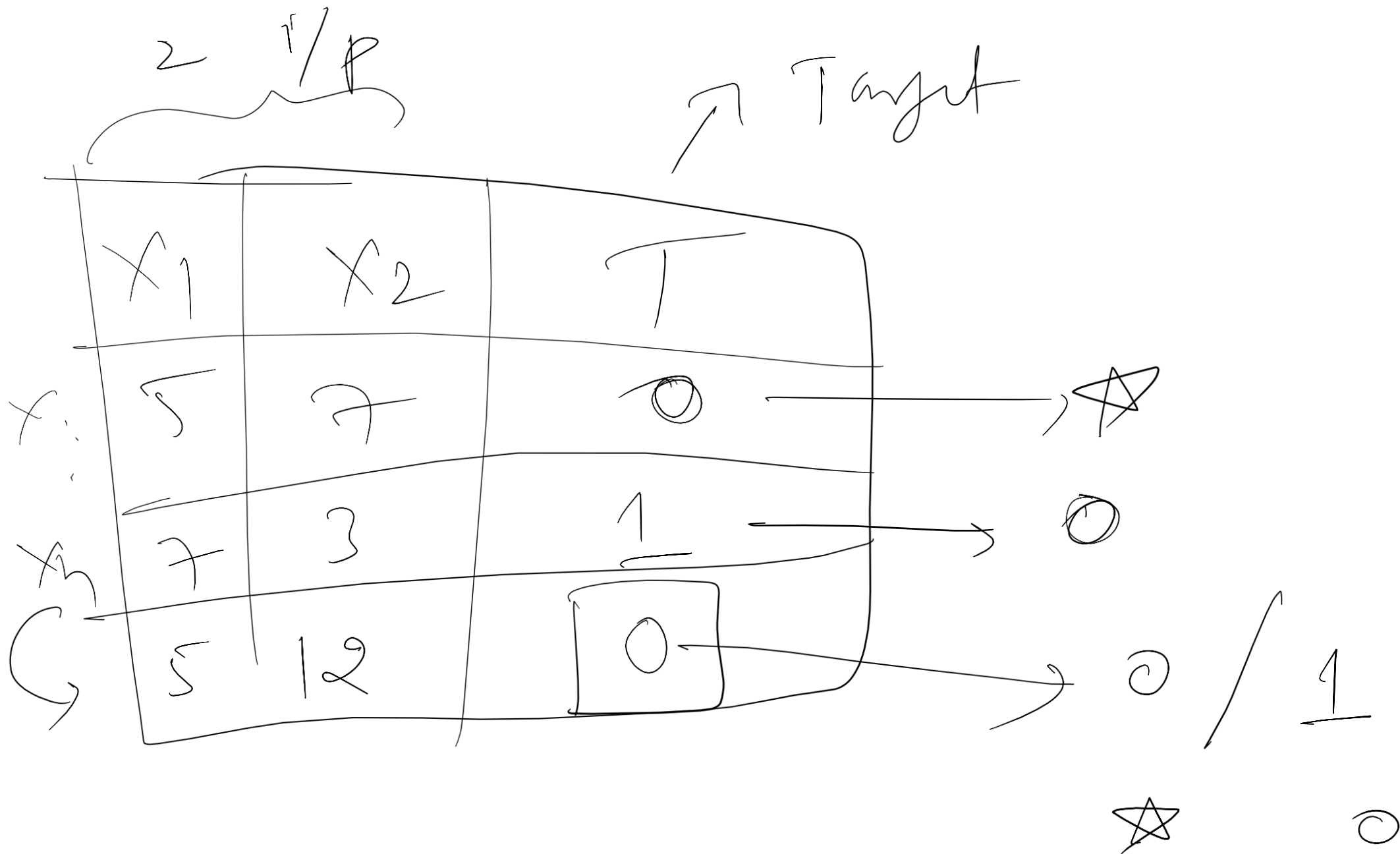
# 1KNN (k-Nearest Neighbor)

↳ Super-simple Supervised Learning algo

↳ Lazy learning algorithm









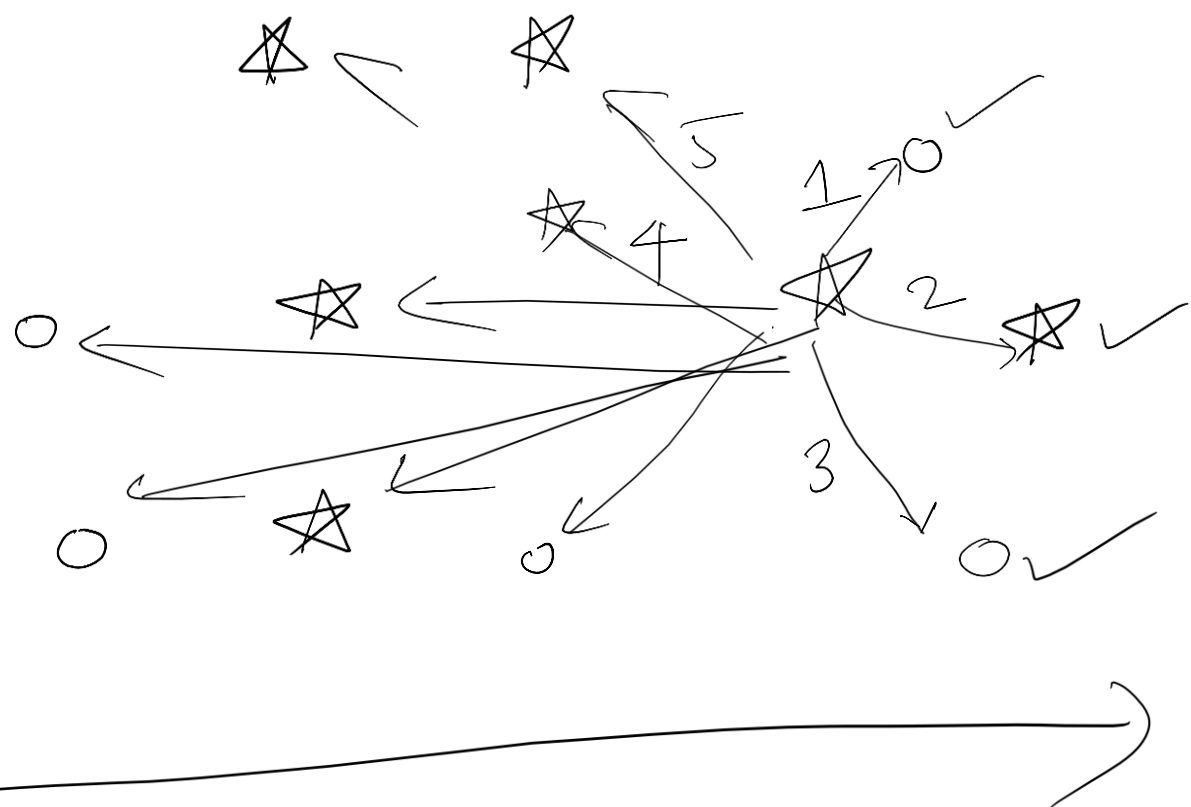
KNN




$K = 3, 5, 7, 9$

0 -   
1 - 0

$\frac{7}{p}$   
0 - 2  
  $\rightarrow 3$

$K = 5$



1  $\rightarrow$  0, 2  $\rightarrow$  , 3  $\rightarrow$  0, 4  $\rightarrow$  , 5  $\rightarrow$  

	X1	X2	X3	T	Distance
0	3	4	3	0 ✓	70
1	7	3	2	1 ✓	20
2	5	2	3	1 ✓	50
3	2	2	1	0	100
4	1	5	7	1 ✓	

$k = 3$

$0 \rightarrow 1$

$1 \rightarrow 2$

$x_1$	$x_2$	$x_3$	$x_n$	$T$	Distance
				21.5	1
				22	2
				53	4
				35.2	3
$21.5 + 22 + 35.2 / 3 \Rightarrow$					Pred

Classification  $\rightarrow$  Mode

Regression  $\rightarrow$  Mean

Distance

$$\sqrt{(x_1 - y_1)^2 + (x_2 - y_2)^2 + (x_3 - y_3)^2}$$

$\begin{matrix} \textcircled{i/p} \\ y \end{matrix}$

$\downarrow$

$\begin{matrix} \textcircled{i/p} \\ x \end{matrix}$

$$\sqrt{\sum_{i=1}^3 (x_i - y_i)^2}$$

$i \rightarrow \text{Record}$

$$\left( (x_1 - y_1)^2 \right)^{1/2}$$

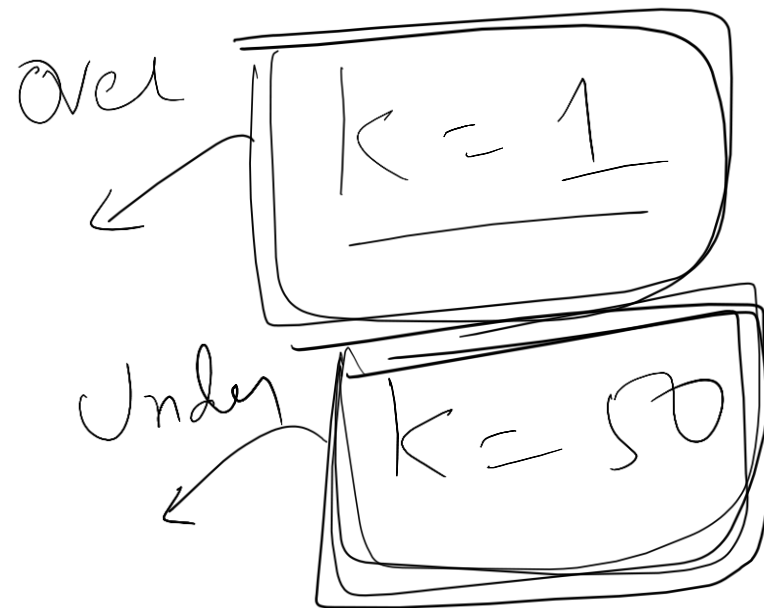
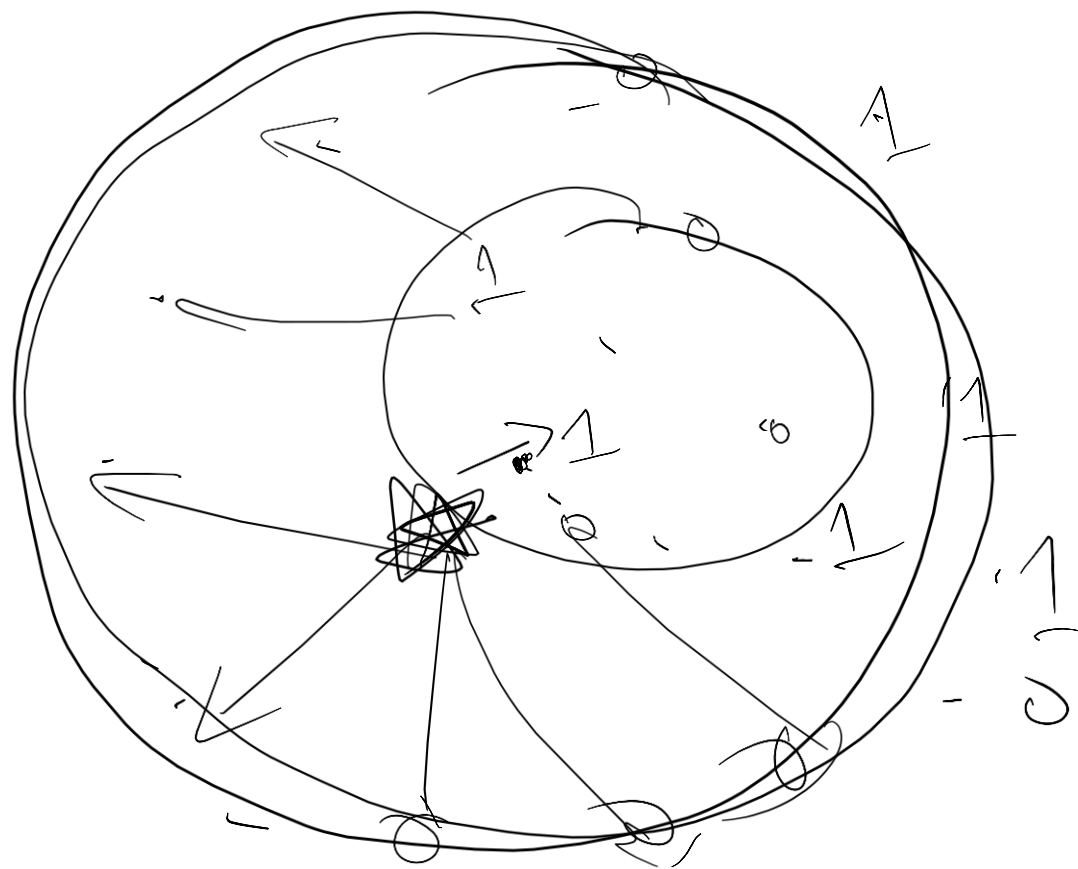
$$\sqrt{(x_1 - y_1)^2}$$

$$\checkmark \quad \sqrt{\quad} = 2$$

$$\checkmark \quad \quad = 3$$

$$\checkmark \quad \quad = 4$$

$n =$





$$x_1 \quad | \quad x_2 \quad | \quad x_3 \quad | \quad \dots \quad x_{1,500}$$

$$(x_1 - y_1)^2 + (x_2 - y_2)^2 + (x_3 - y_3)^2 + \dots$$

$$\left( x_{1,000} - y_{1,000} \right)^2$$

Let's

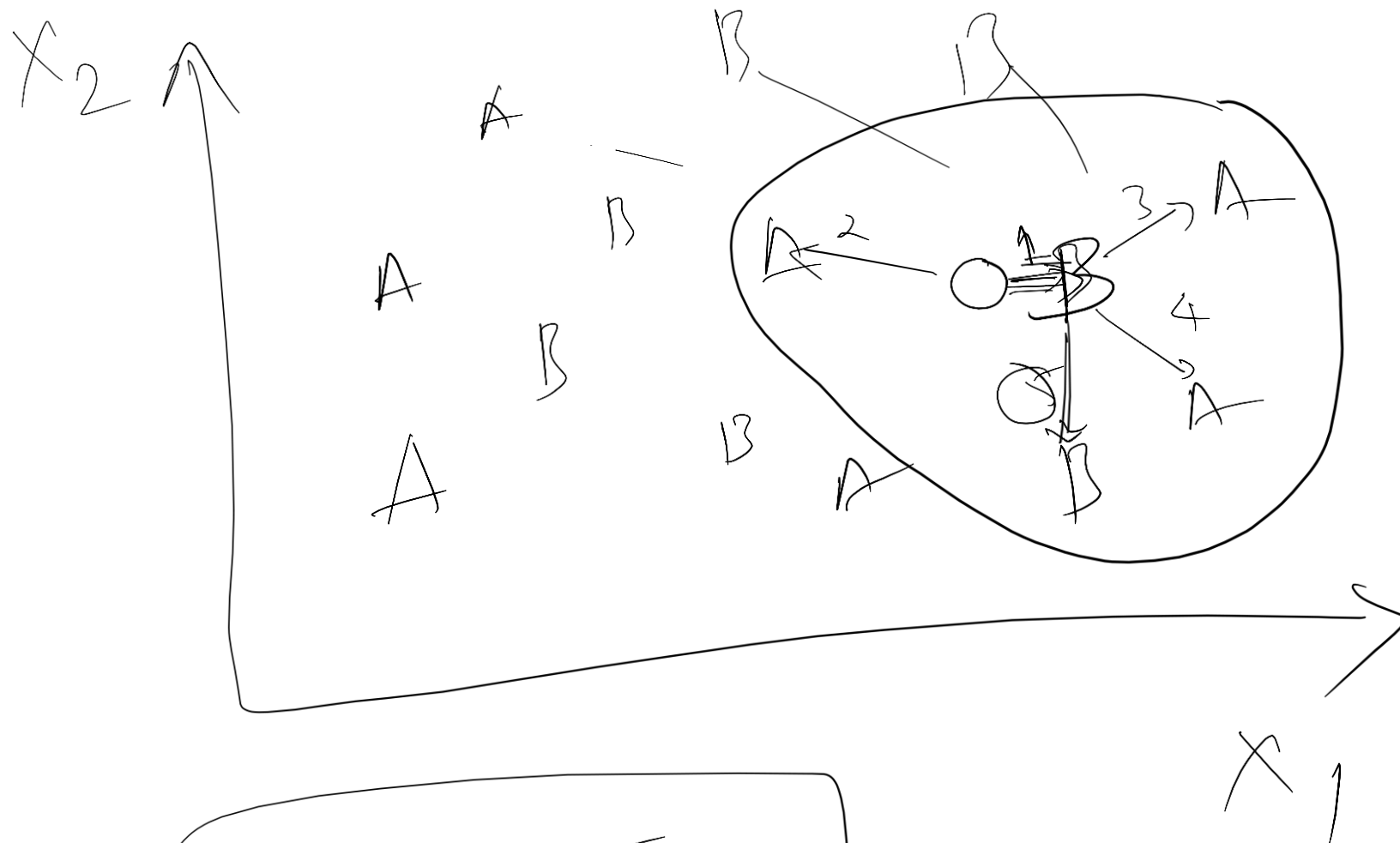
get back

7:55 pm. I.S.T

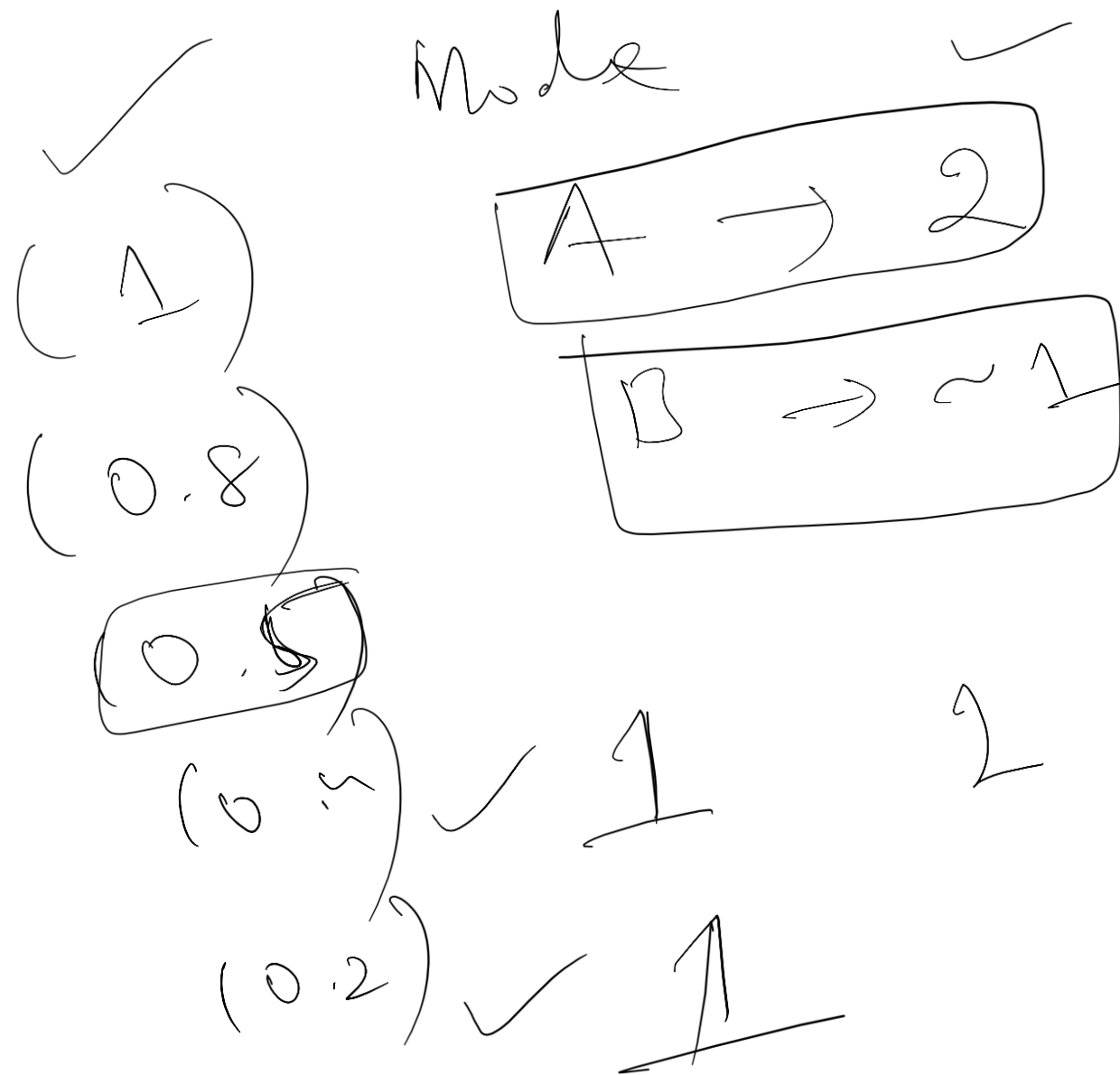
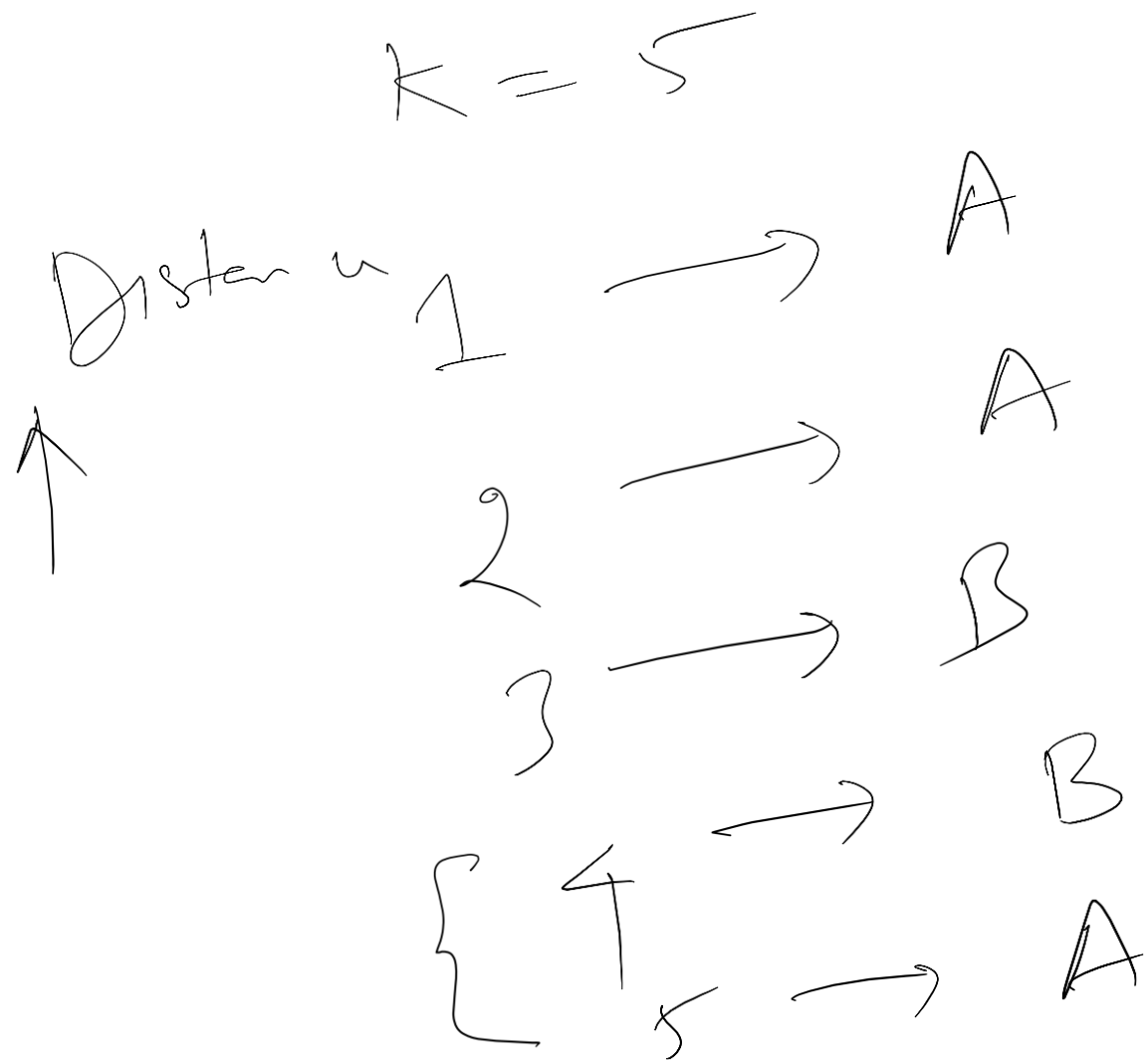
$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$$

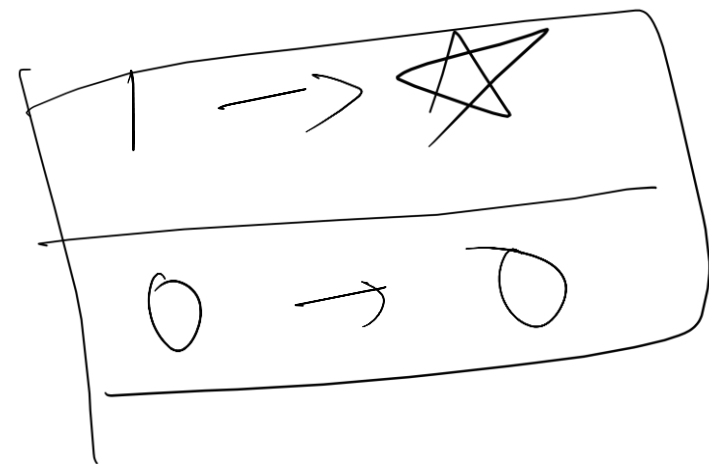
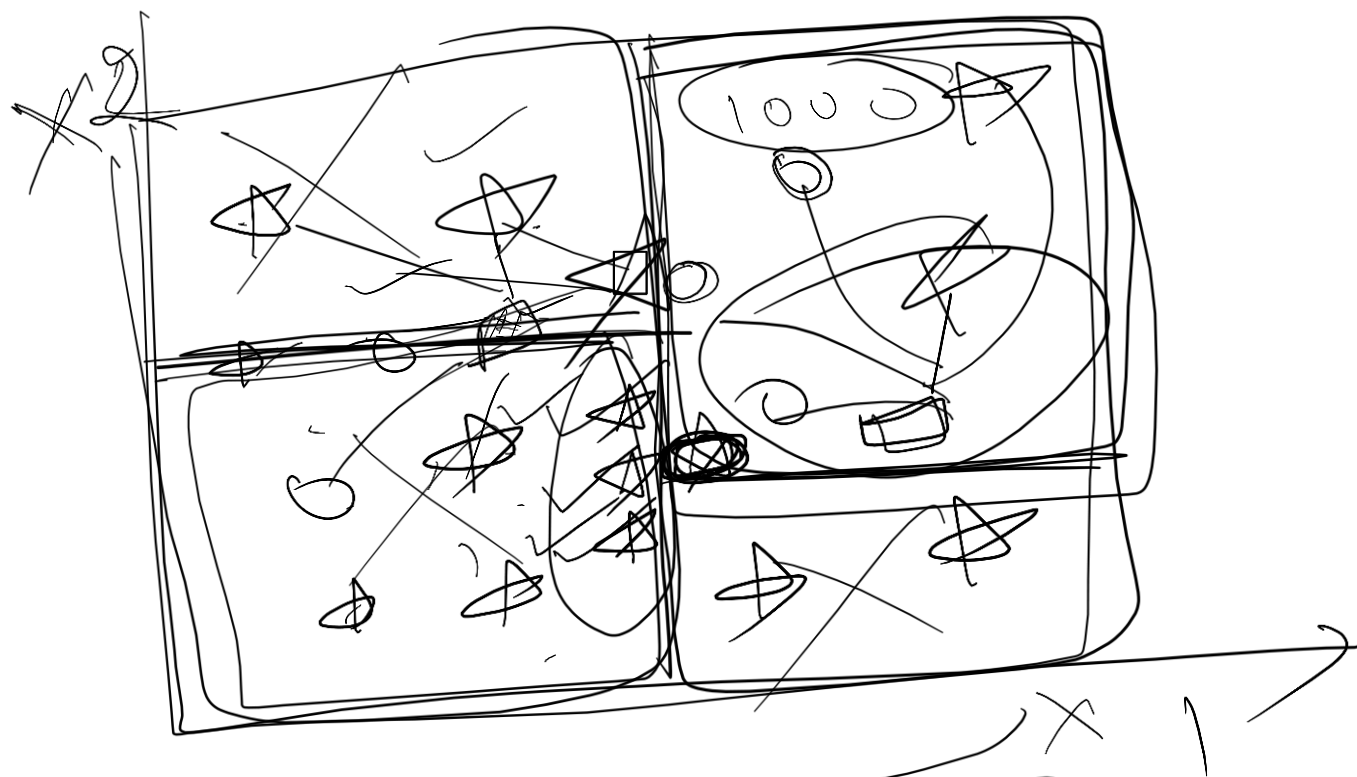
flatter

$$\begin{bmatrix} 1, 2, 3, 4, 5, 6, 7, 8, 9 \end{bmatrix}$$



$k = 5$



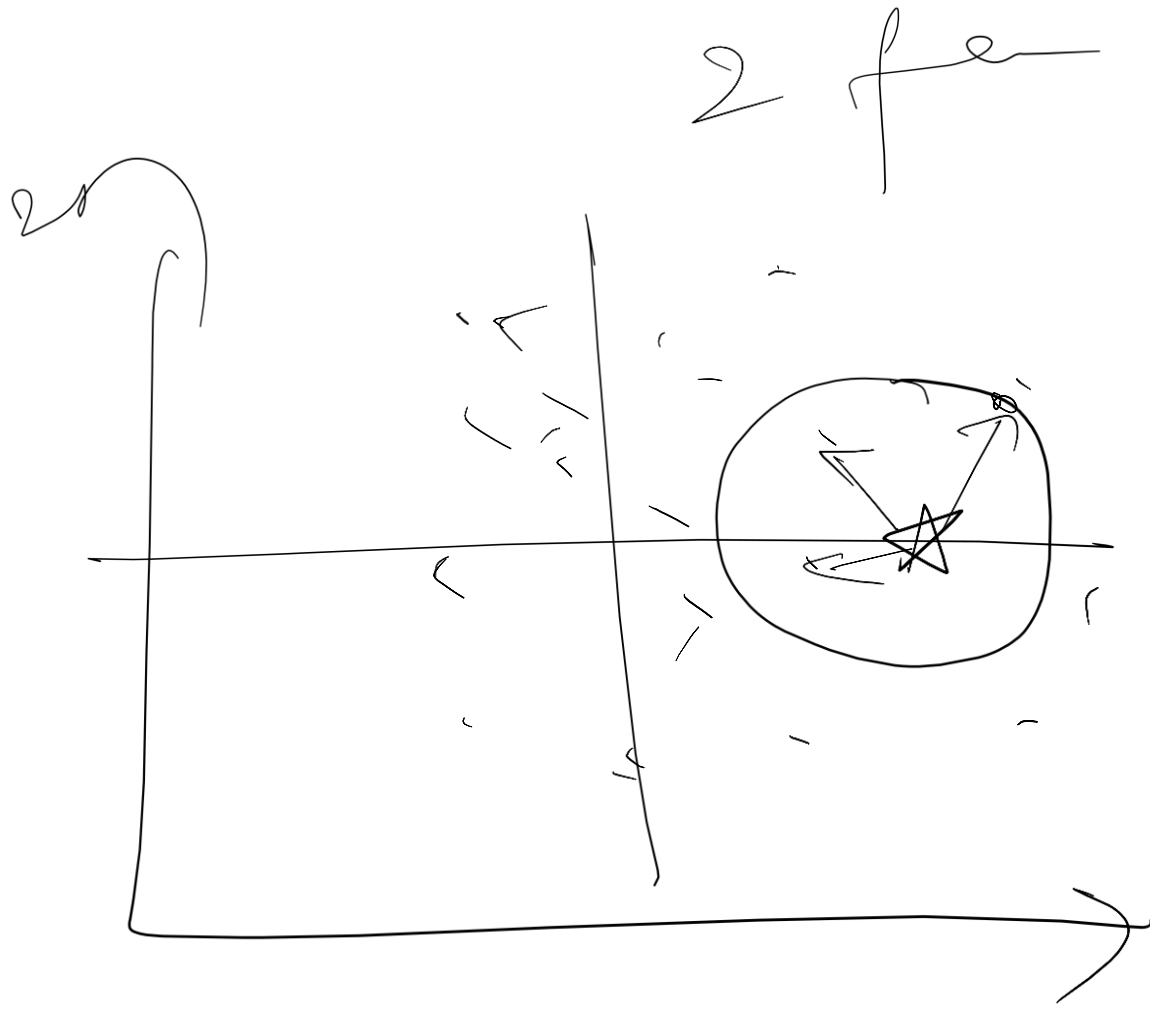


new  $\rightarrow$

mediana  
|  
 $n = 15$

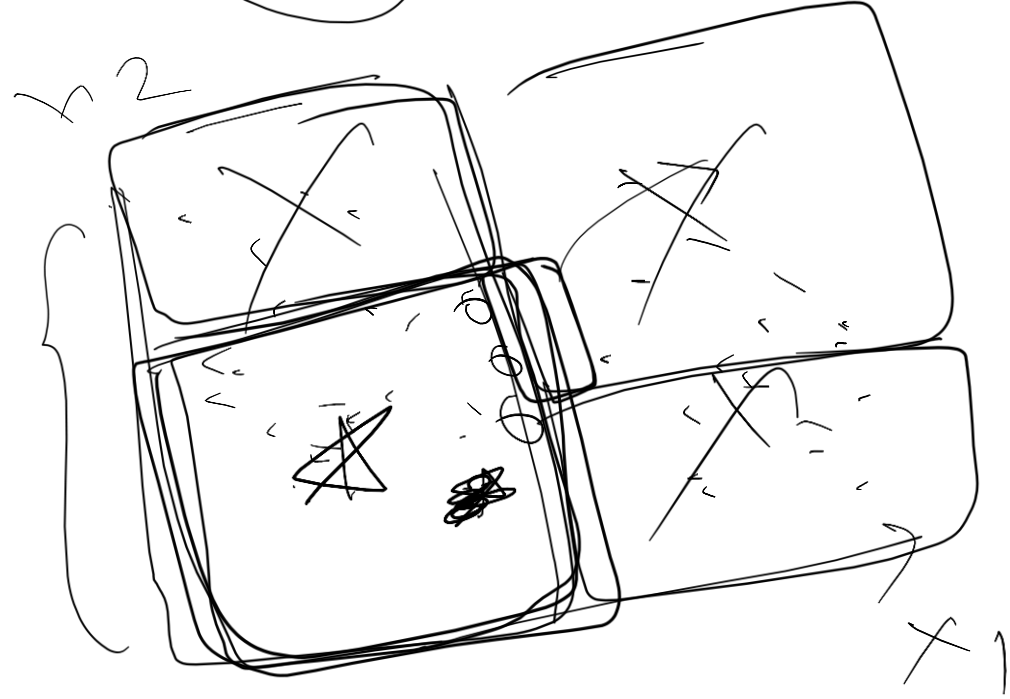
$k = 5 \Rightarrow$

$\rightarrow 3$



cool - 25

28



cool

x<sub>n</sub>

x<sub>1</sub>

i / j

1	1	1	A
0	0	2	B
0	2	3	A
1	1	1	A
1	0	2	<div style="border: 1px solid black; padding: 2px; display: inline-block;">★</div>

Binary

Multi-class

A → 0

B → 1

$$(x_1 - y_1)^2 + (x_1 - y_1)^2 + (x_1 - y_1)^2$$

0 + 1 + 1 = 2

⇒ known ✓



Screening Round: (1)

MAANG

Python

D.S.

Online Assignment - (mcq)

Coder Pad (Live-coding)

Leetcode → sql, pandas (Python)

Technical Assessment: (v.o) 4 ⇒ Sc

(1-2) (3-4)

M.L