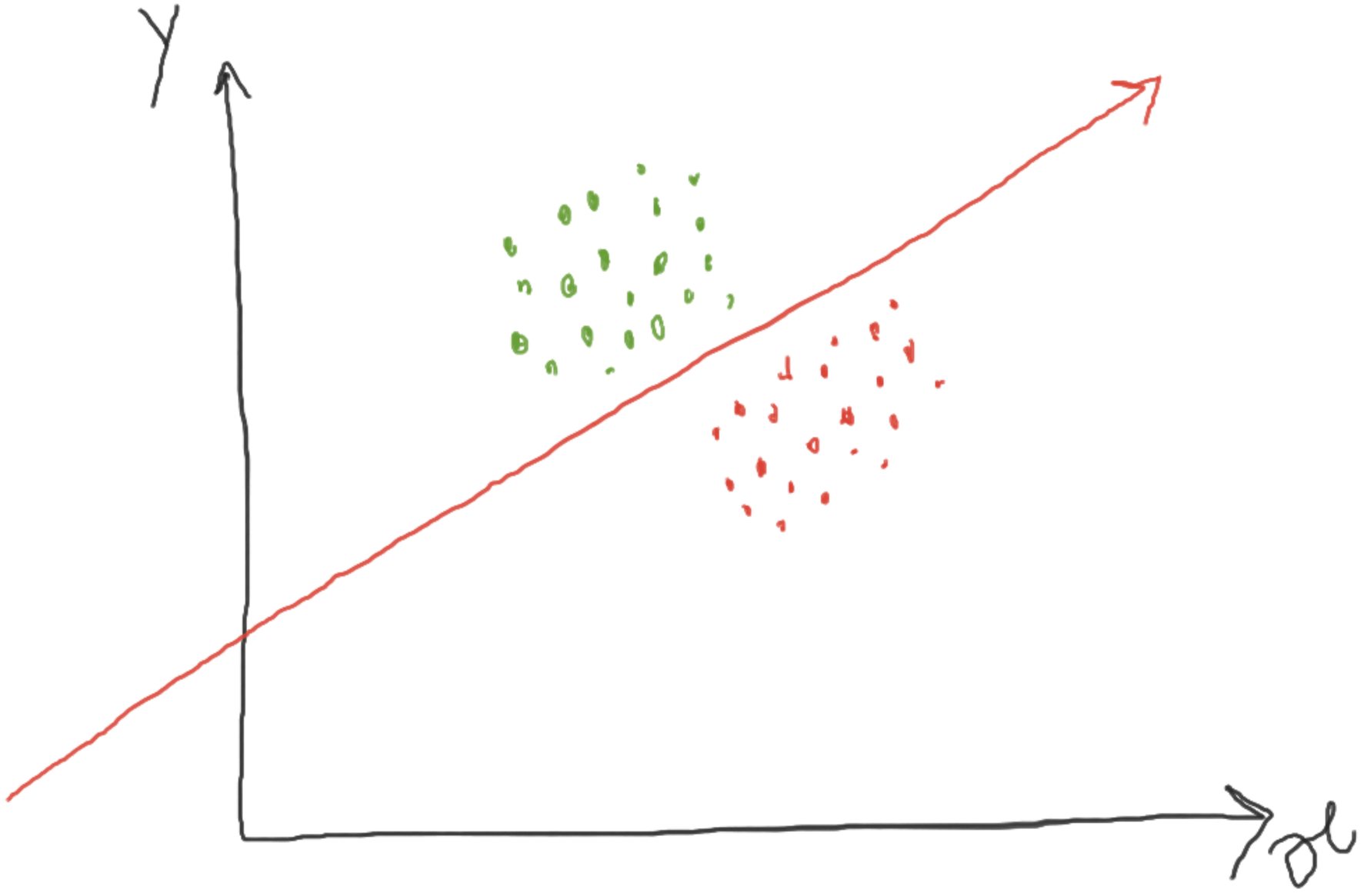
11] Multiclass classification:

:: Target col^n is having more than two unique values.

Color = Red, Green, Yellow

Multi_class = OVR = one Vs Rest

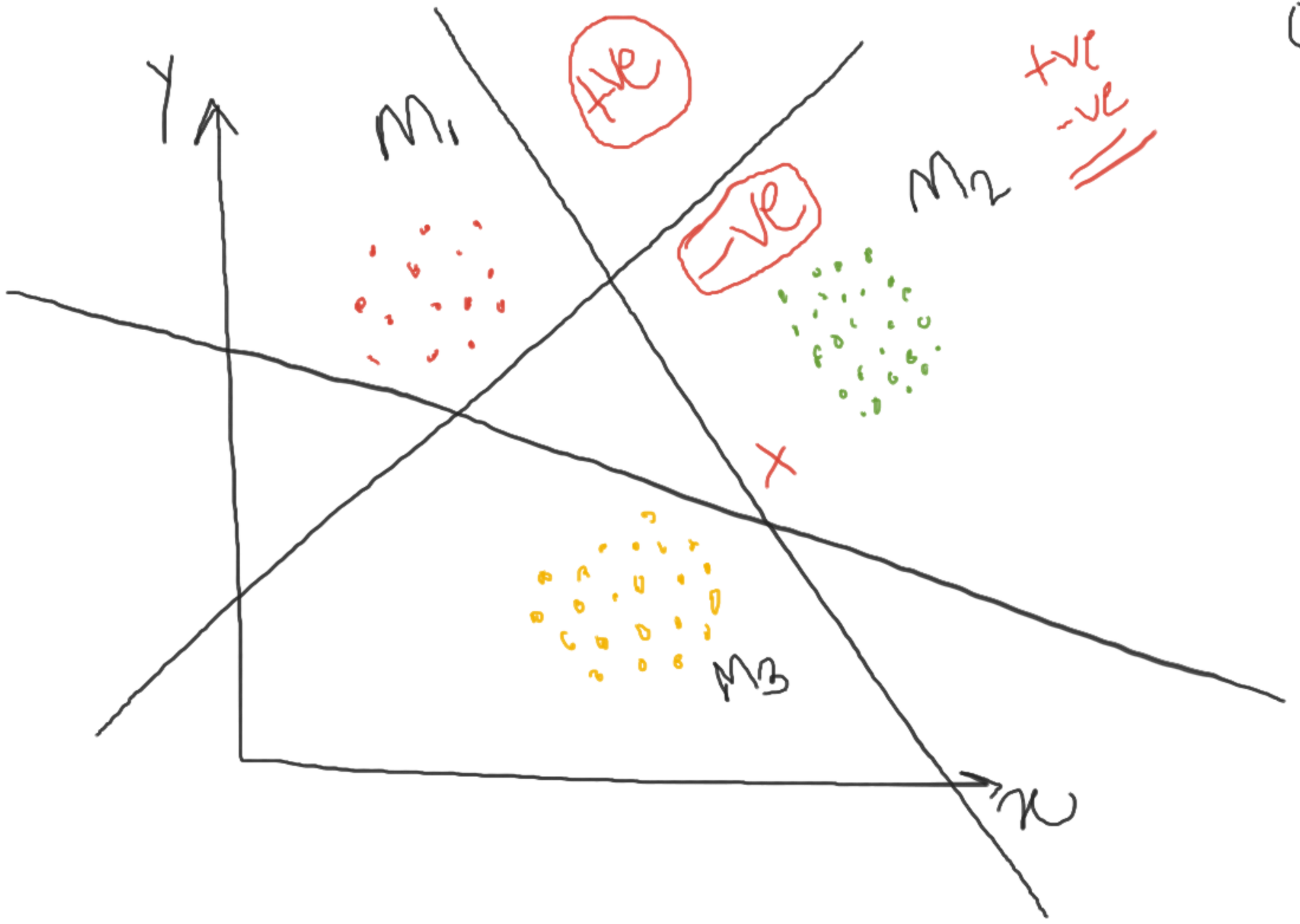


Target

↓

Red → 0

Green → 1



OVR =

one vs rest

$M_1 = (m_2 + m_3)$

$M_2 = (m_1 + m_3)$

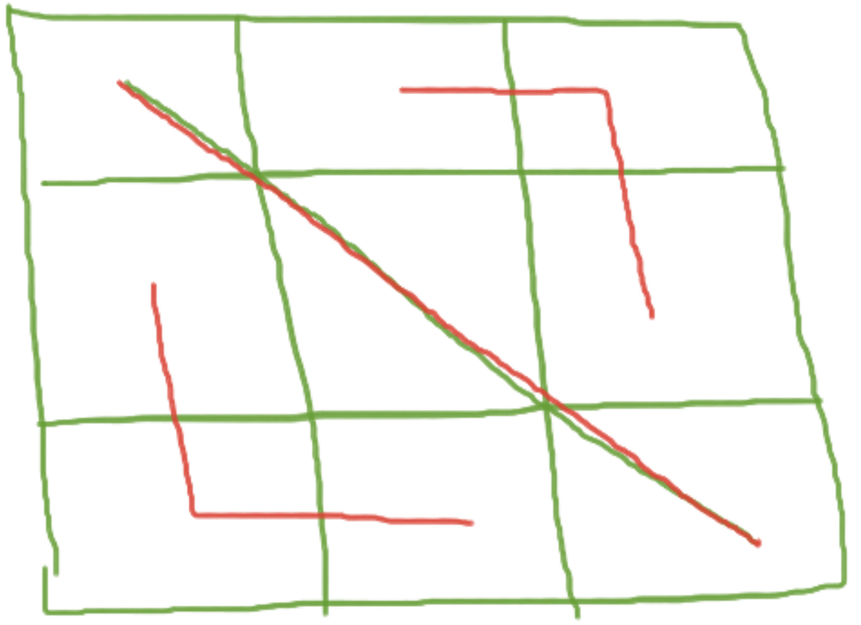
$M_3 = (m_1 + m_2)$

i) M_1 =

ii) M_2 =

iii) M_3 =

3 x 3



x_1	x_2	Y	m_1	m_2	m_3
3	1	Red	+ve	-ve	-ve
1	5	Green	-ve	+ve	-ve
7	6	Red	+ve	-ve	-ve
6	3	Yellow	-ve	-ve	+ve
2	4	Green	-ve	+ve	-ve
4	2	Yellow	-ve	-ve	+ve

VR

Red = 20
+ve

Green: 20 + Yellow = 20
-ve

OVR

Red(M_1) $\frac{0}{0}$