

target

		response	
		0	1
0	0	^{CR} TN	^{FA} FP
	1	^{MISS} FN	^{HIT} TP

$$\text{Precision} = \frac{TP}{TP + FP}$$

, recall
TPR

$$\text{FPR} = \frac{FP}{FP + TN}$$
$$\frac{TN}{TN + FN}$$

$$= \frac{TP}{TP + FN}$$

$$p = \text{ilogit}(\beta_0 + \beta_1 x_i)$$

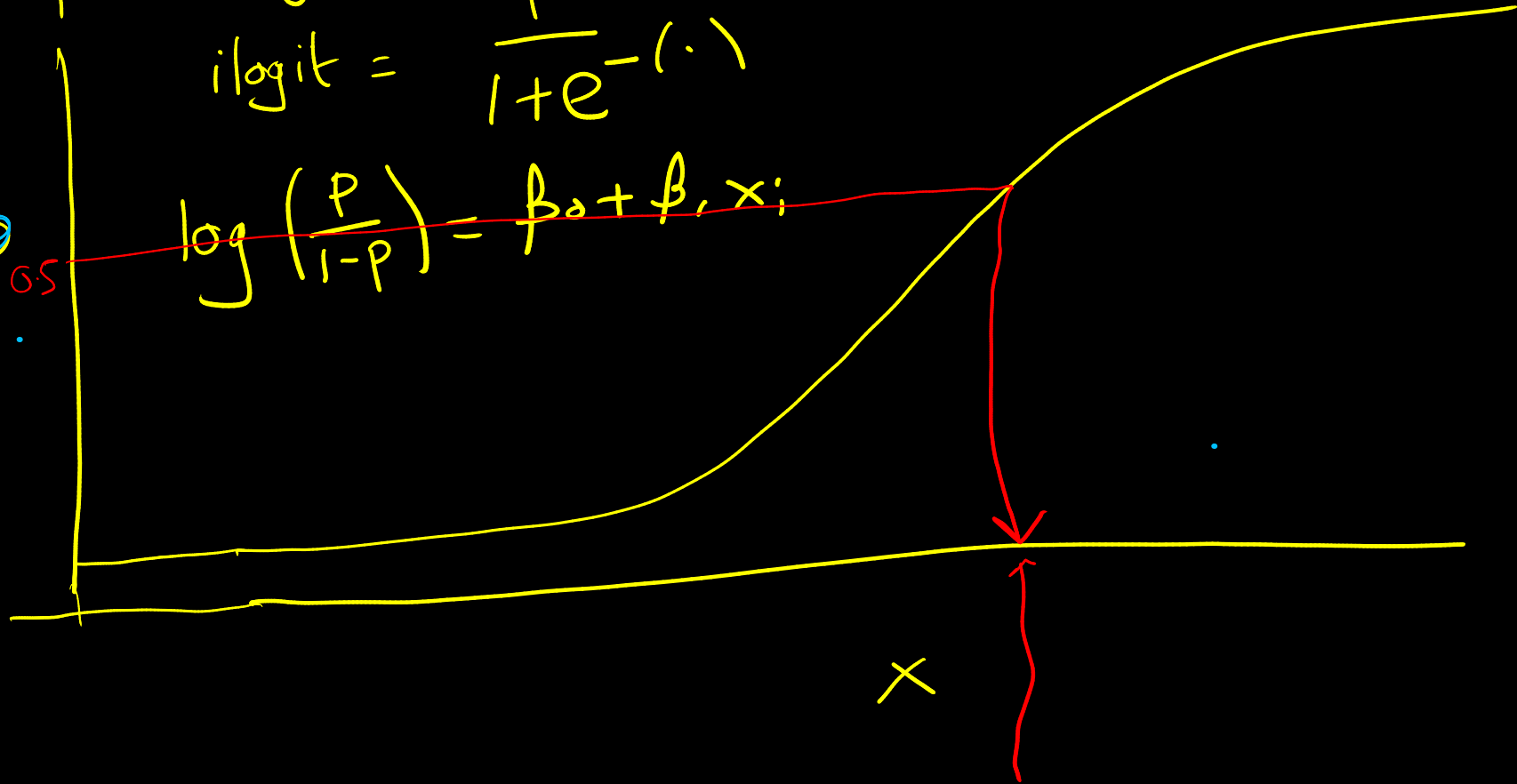
$$\text{ilogit} = \frac{1}{1 + e^{-(\cdot)}}$$

$$\log\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 x_i$$

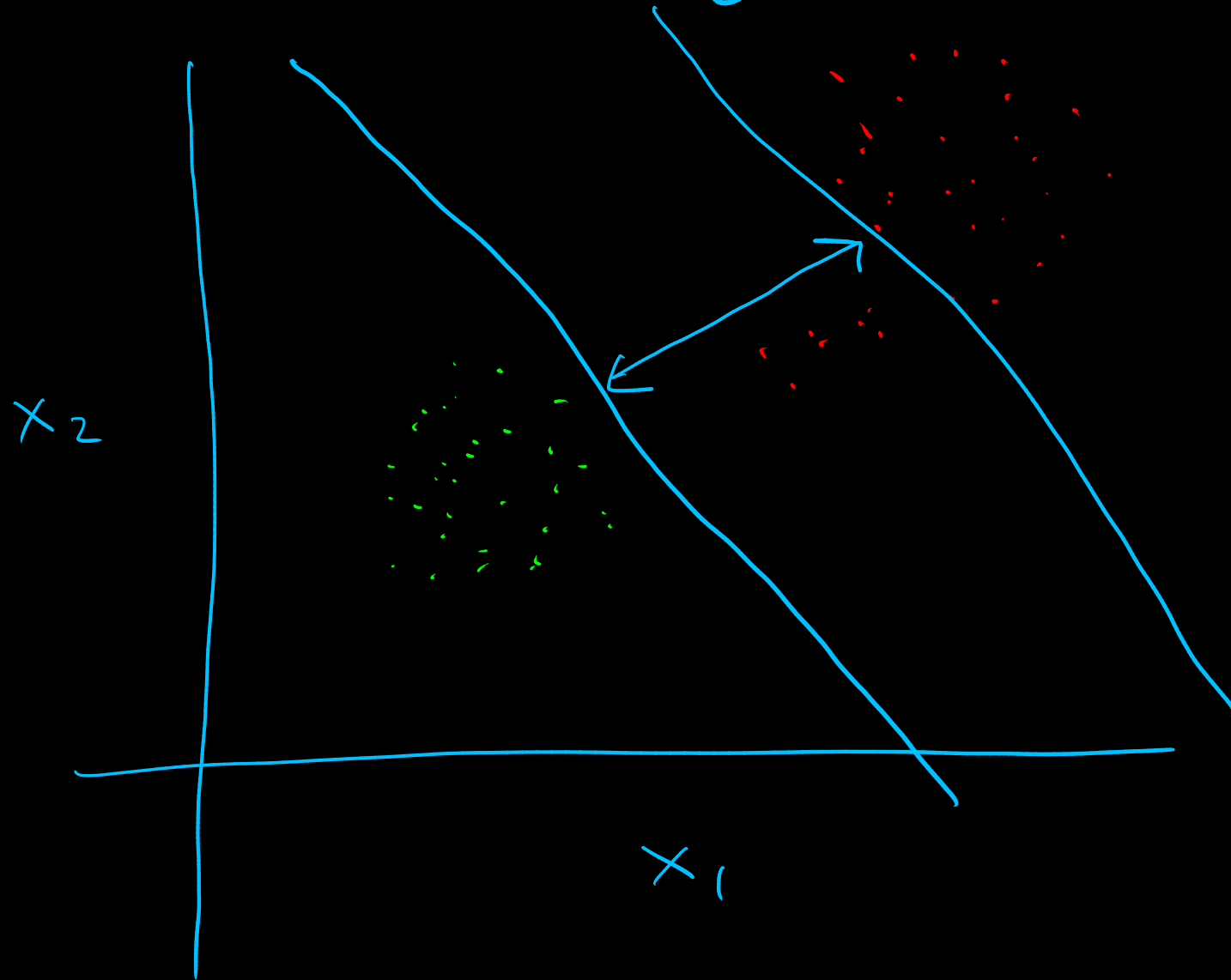
p

0.5

x

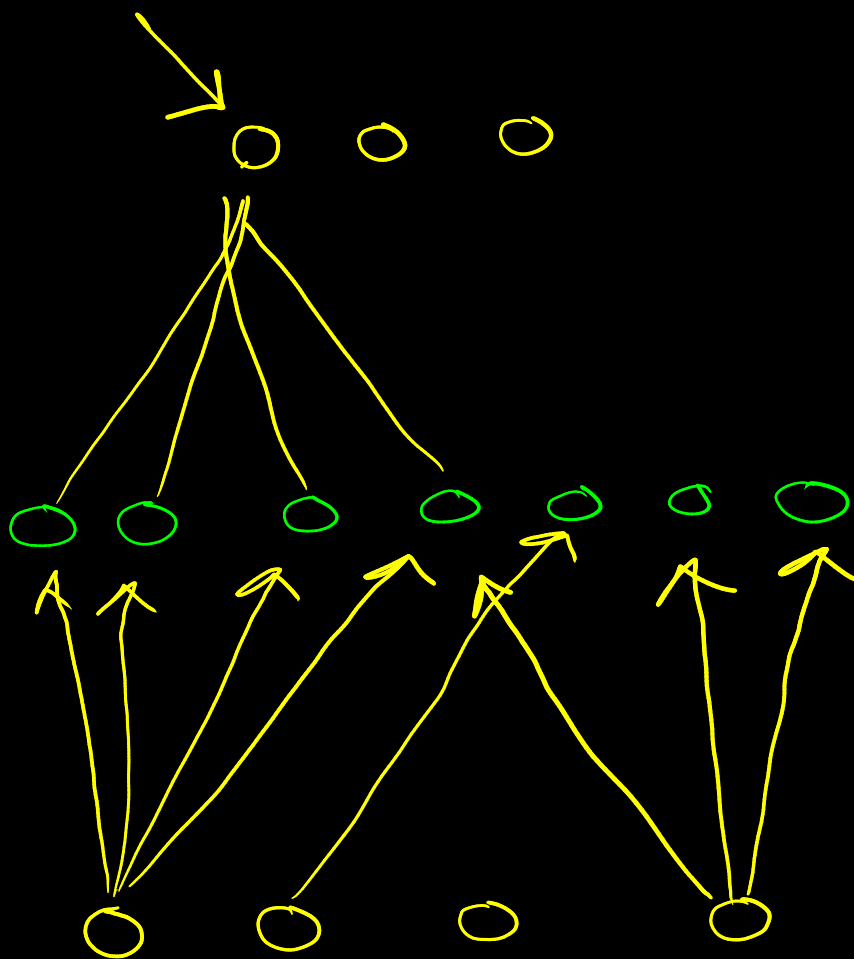


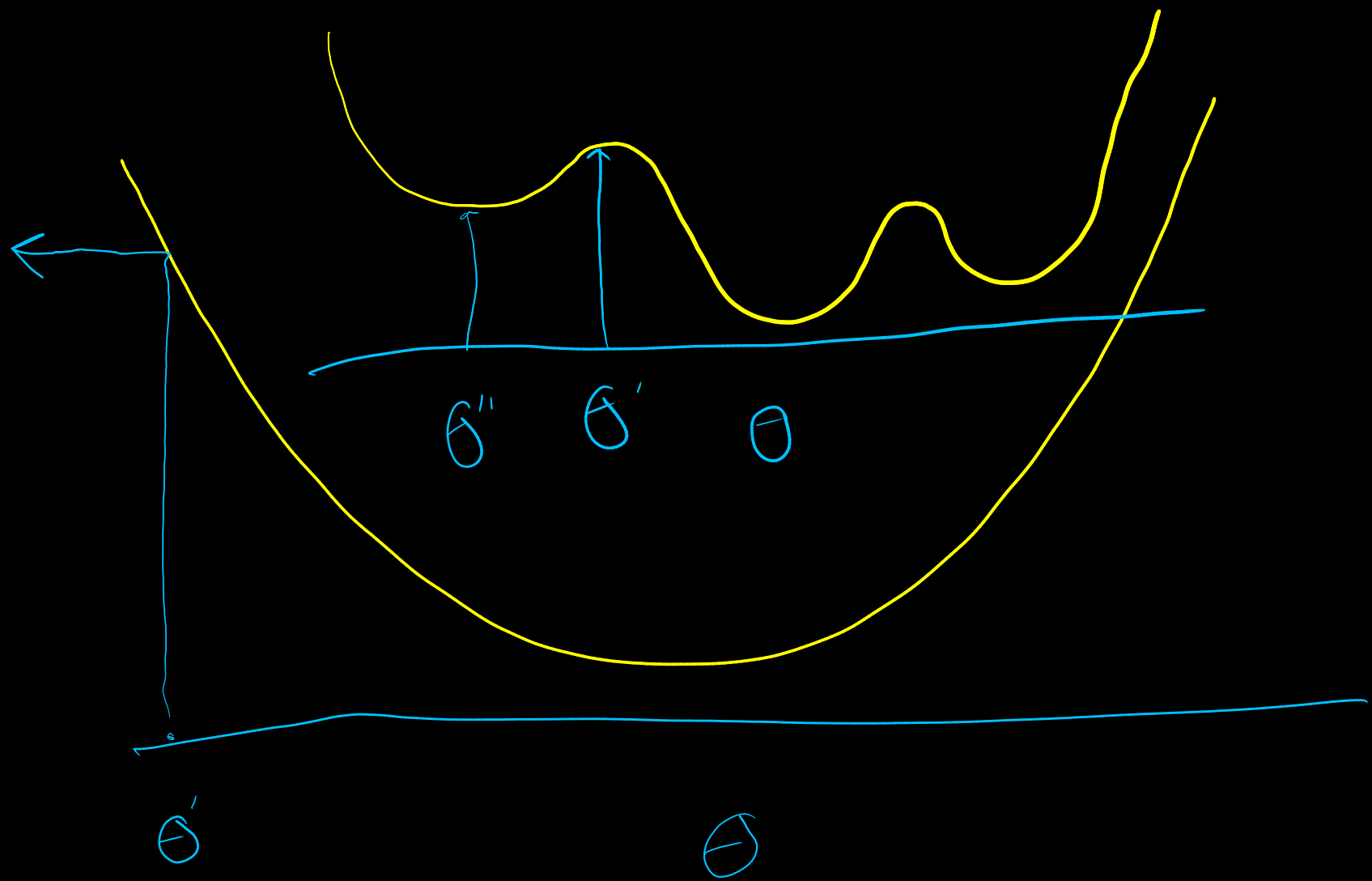
max margin classifier



$$\frac{e^{x_k}}{\sum_{k=1}^3 e^{x_k}}$$

MLP





XOR

0

T	T	F
T	F	T
F	T	T
F	F	F

Σ

backpropagation

