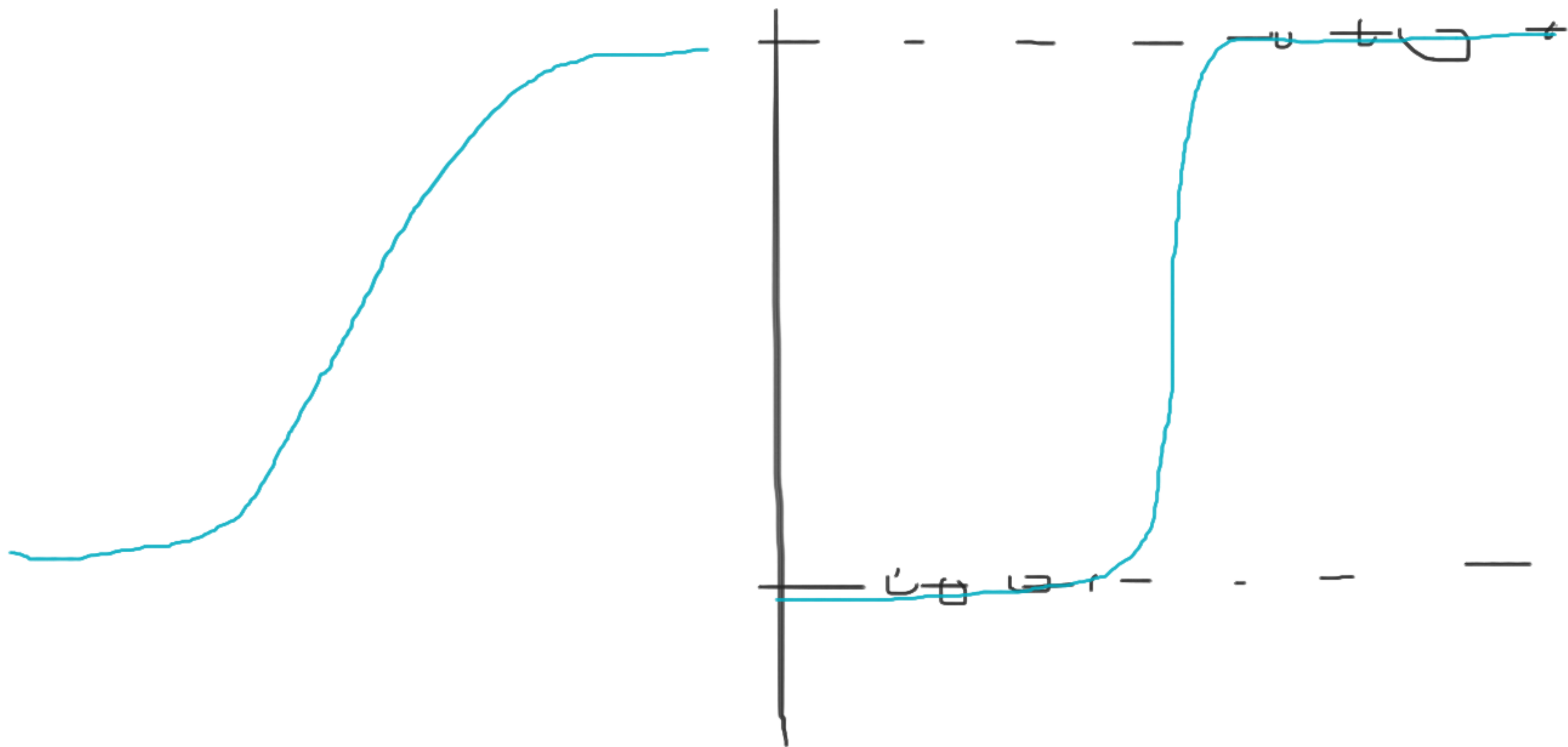


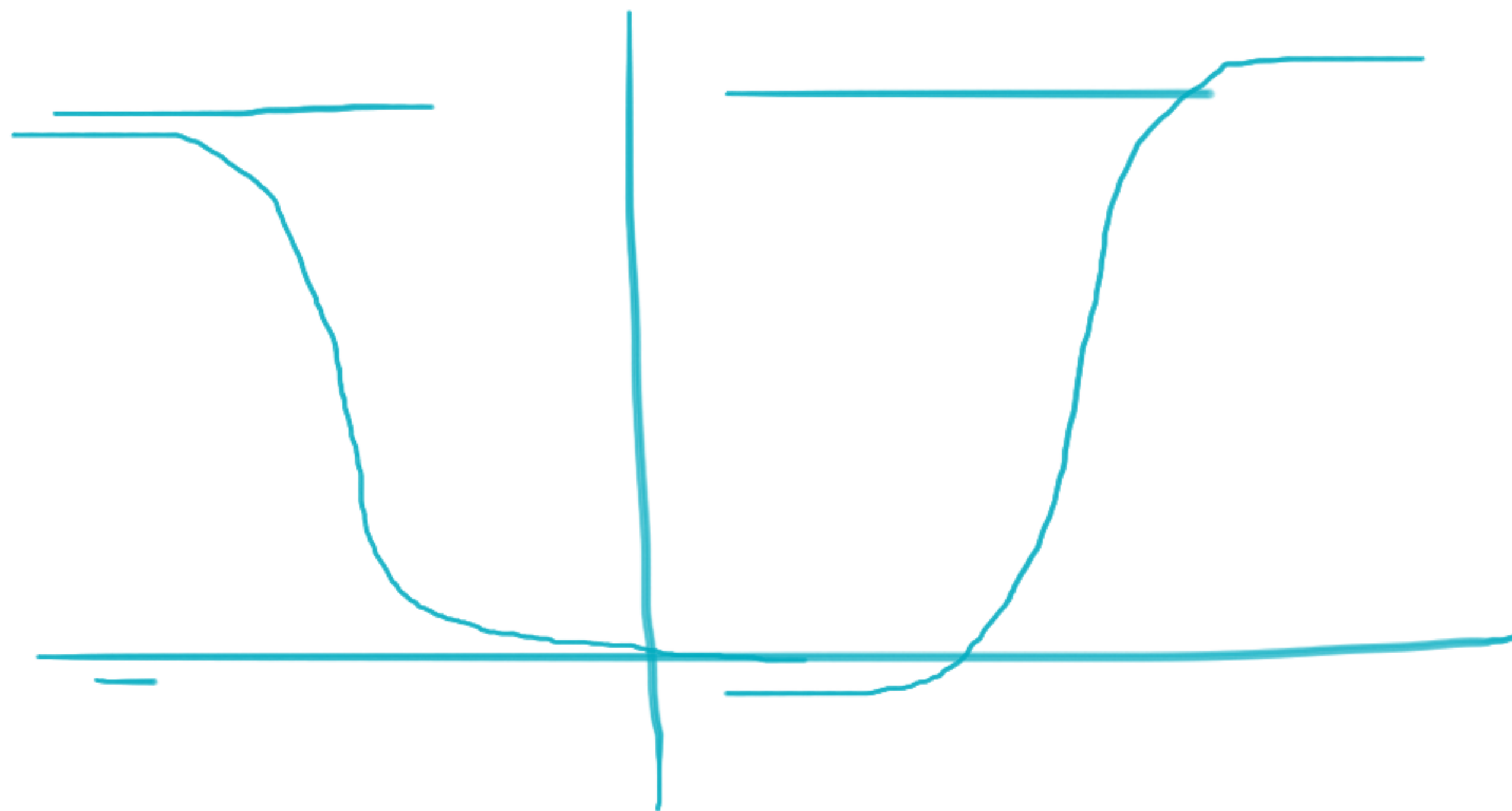
$$f(x) = \frac{1}{1 + e^{-y}}$$

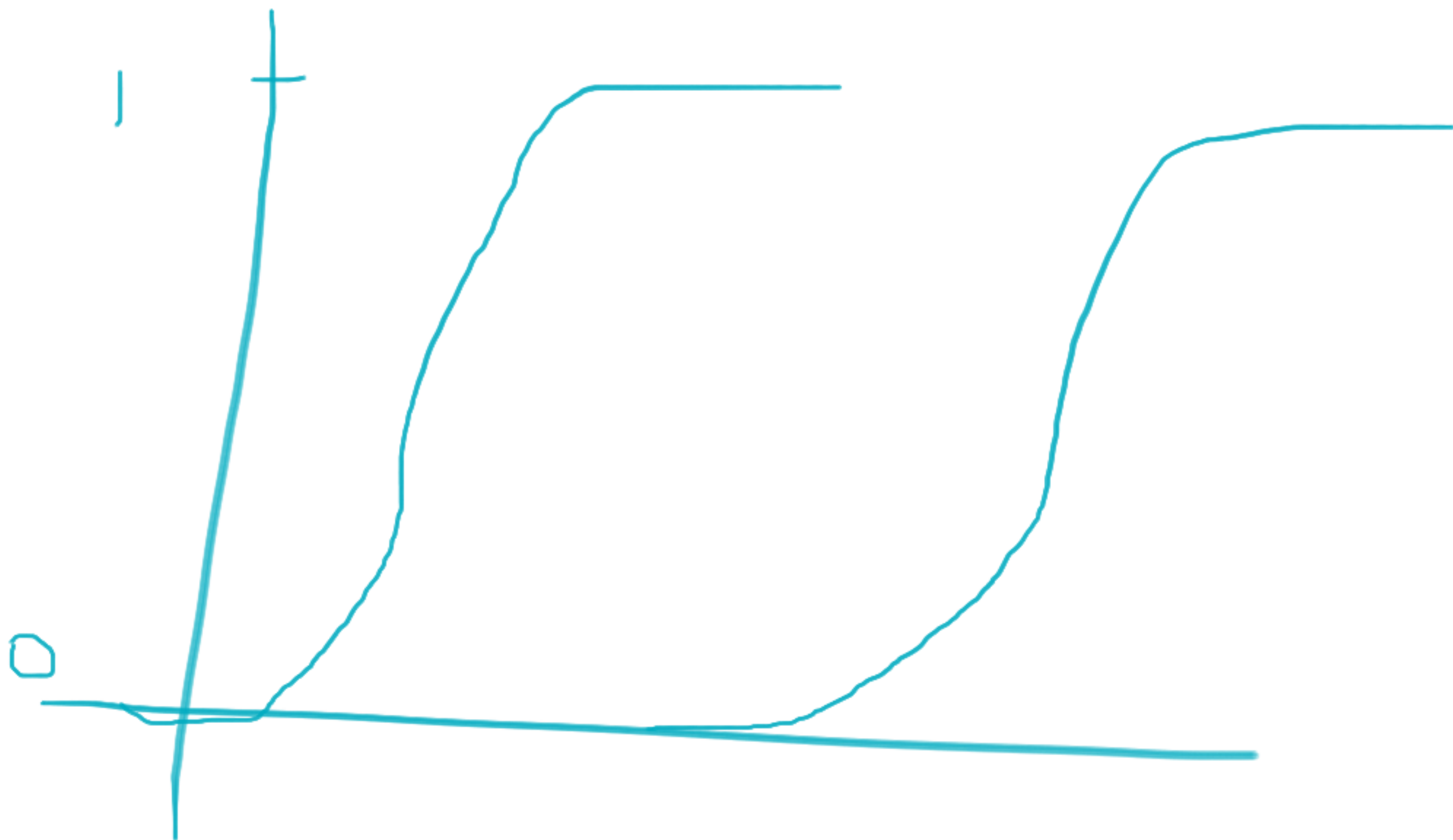
$$= \frac{e^y}{1 + e^y} = \frac{e^y / e^y}{\frac{1}{e^y} + \frac{e^y}{e^y}}$$

$$= \frac{1}{e^{-y} + 1}$$









$$LLT = -\frac{1}{N} \sum y_a \times \log(y_p) + (1 - y_a) \times \log(1 - y_p)$$

$$= 1 \times \log(1) + \underline{0 \times 0}$$

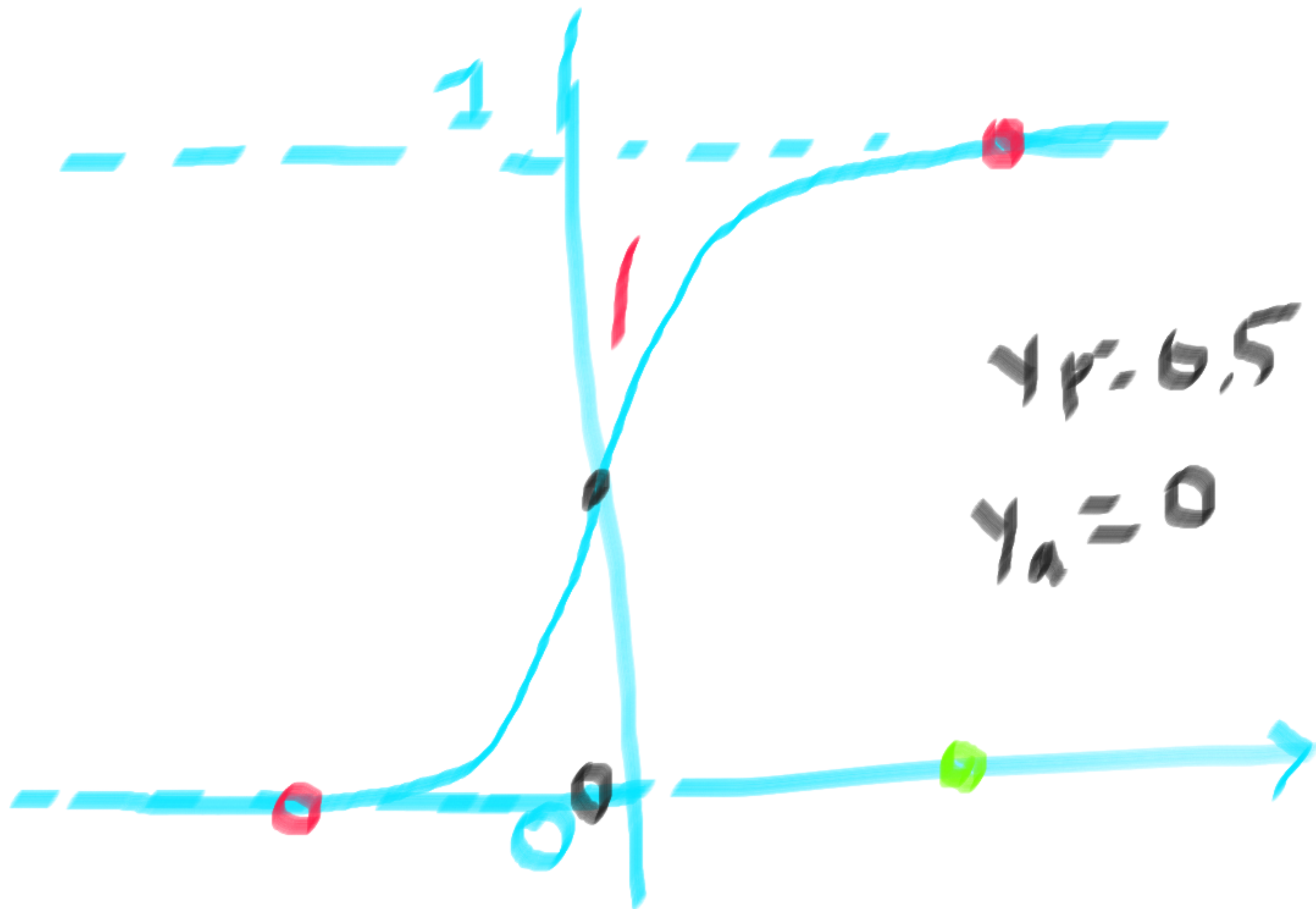
$$\left\{ \begin{array}{l} y_p = 1 \\ y_a = 1 \end{array} \right.$$

$$= 1 \times 0 = 0$$

$$= 0 \times 0 + 1 \times 0 = 0$$

$$\left\{ \begin{array}{l} y_p = 0 \\ y_a = 0 \end{array} \right.$$

$$\frac{1}{4} = 0$$
$$\frac{1}{p^2} = 0$$



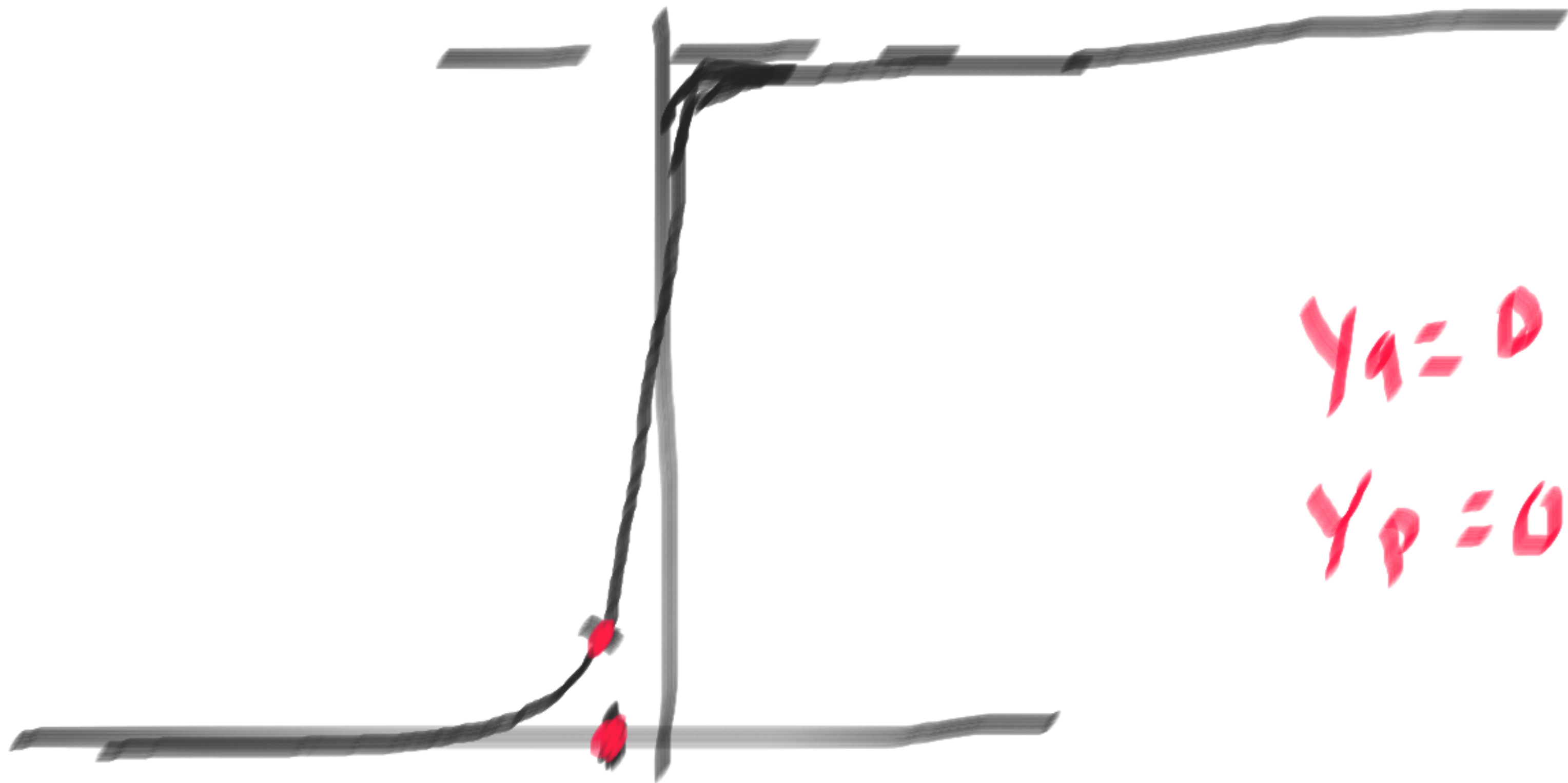
$$y_u = 0$$

$$y_p = 1$$

$$L = \frac{0 \times \log(0) + (1-0) \times \log(1-0)}{1}$$

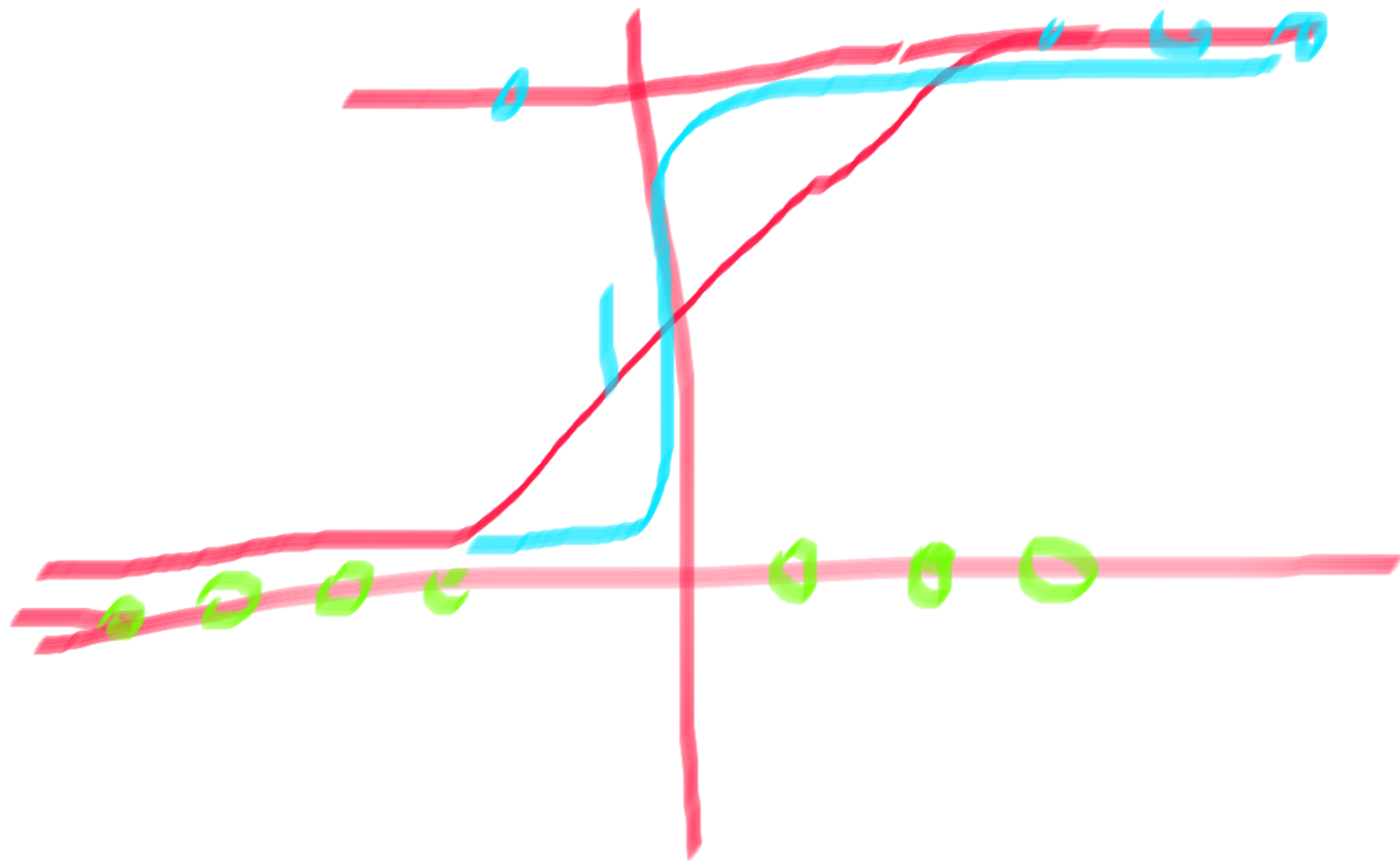
$$L = 0 + (1 \times \log(1-0.99999))$$

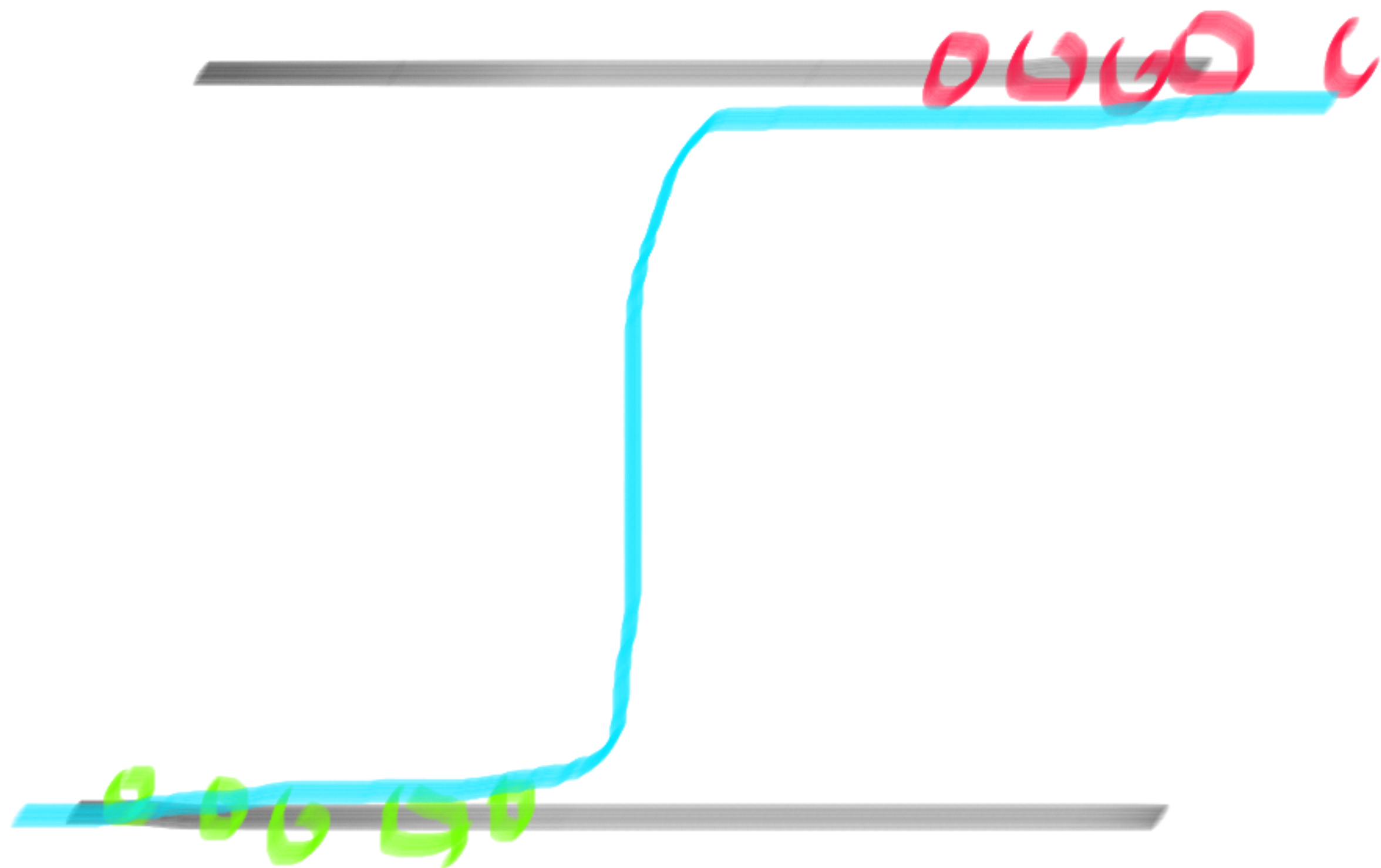
$$L = 0 + (-64.09) = \frac{1}{2} \times \frac{-64.09}{1}$$

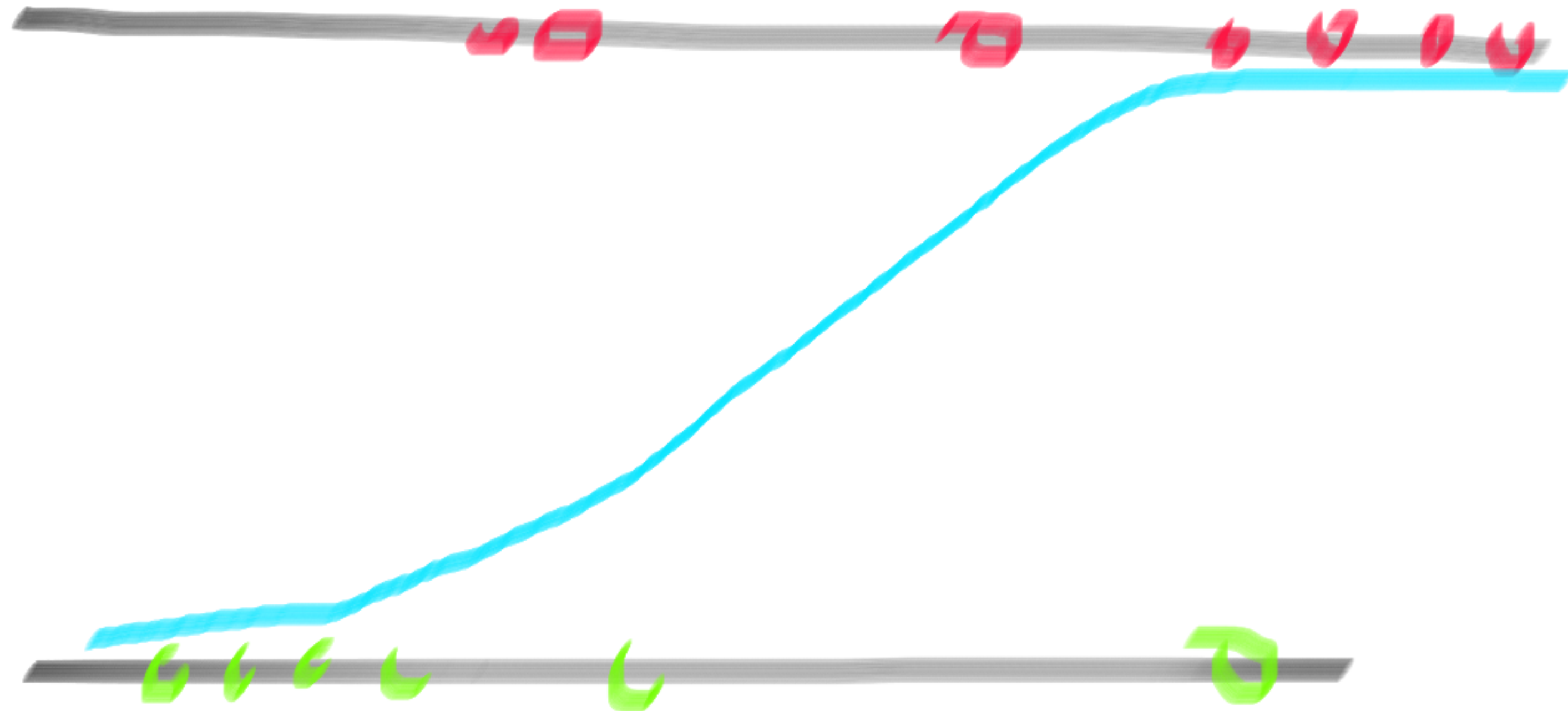


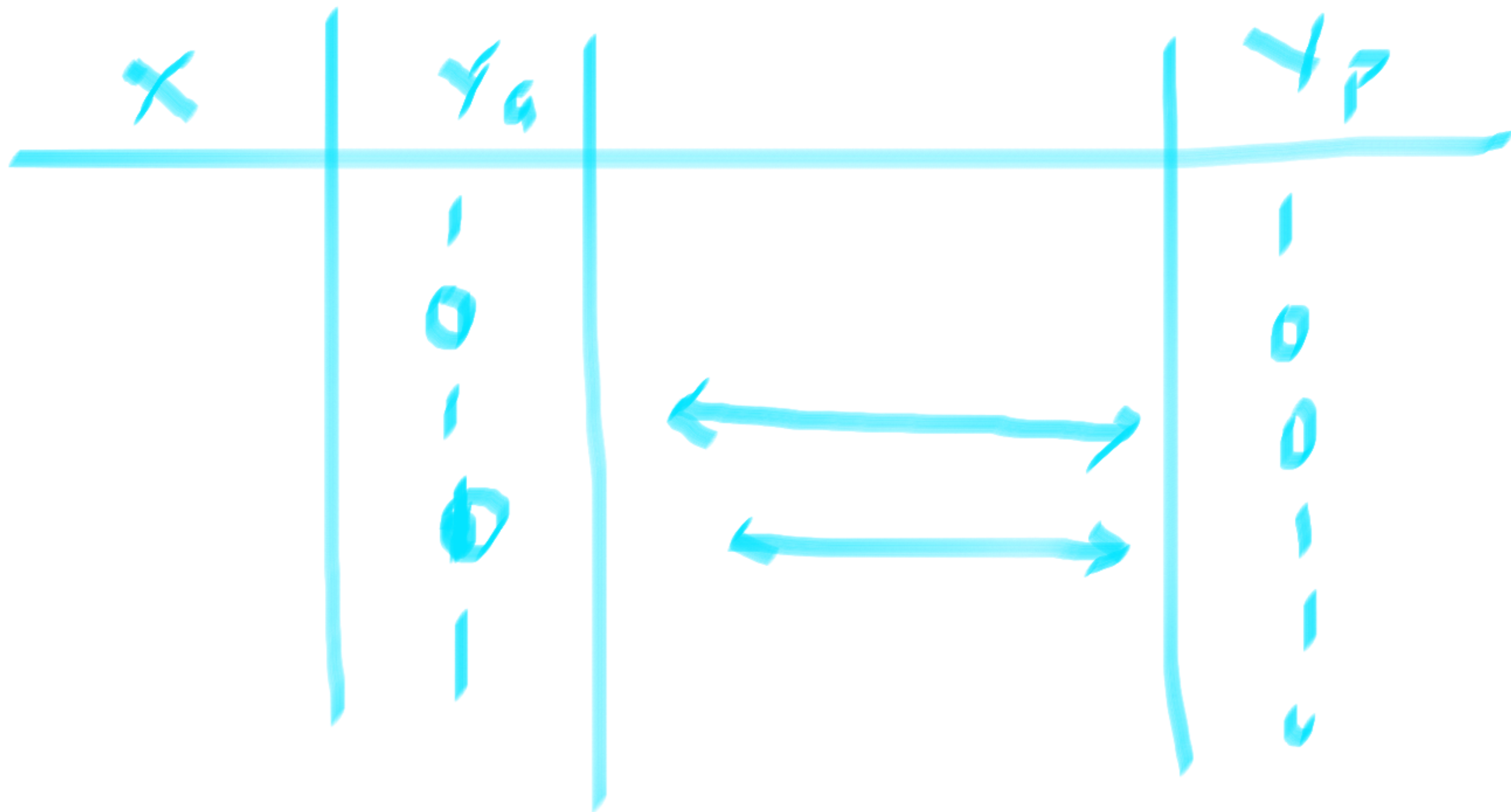
$$y_d = 0$$

$$y_p = 0.1$$









Y_a

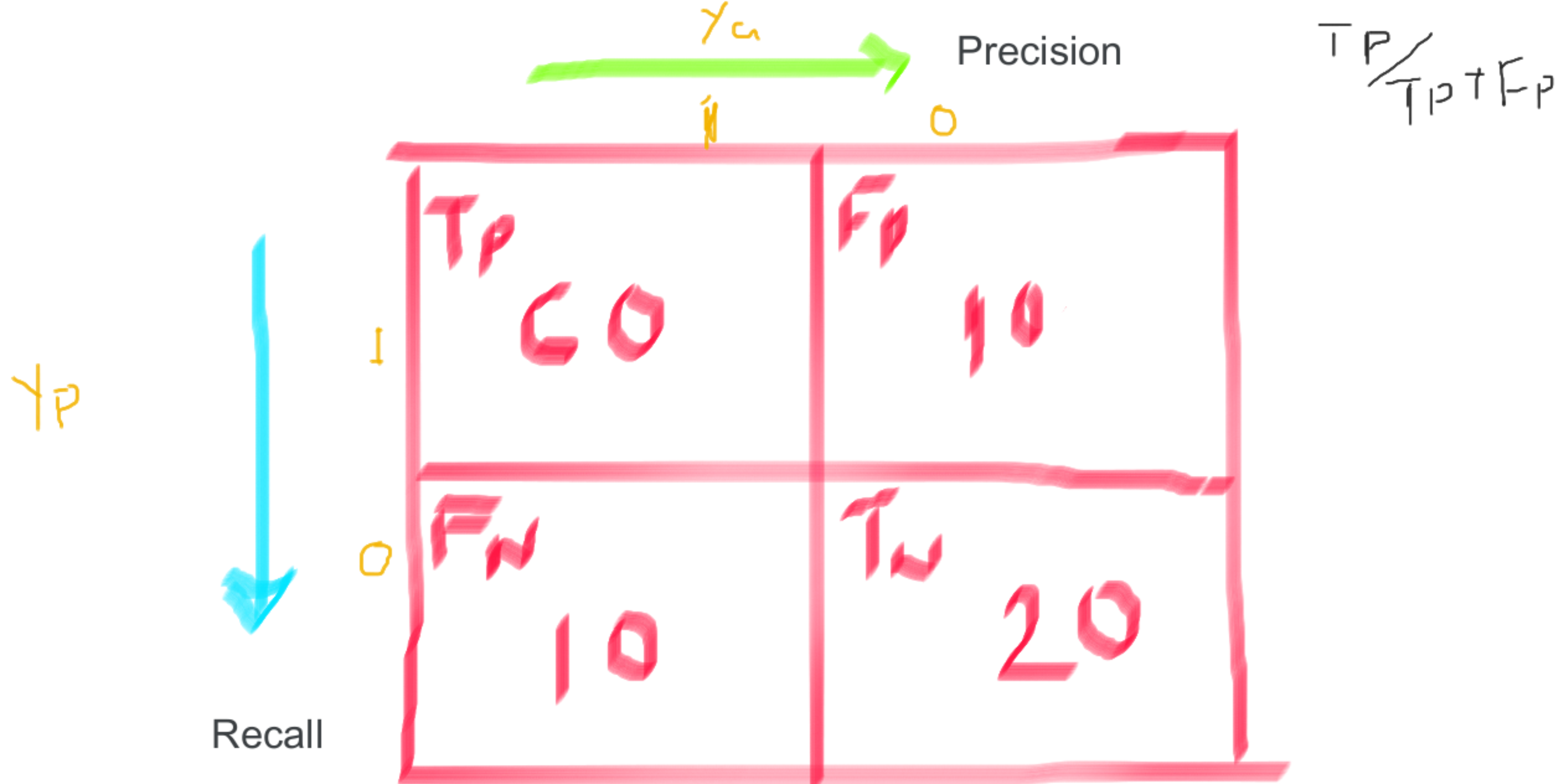
Y_p

1	0
1	0
0	1

Type I error

Type II error

$$\text{Accuracy} = \frac{TP + TN}{TP + FP + TN + FN}$$
$$= \frac{1}{1} = 100\%$$



Classification matrix/
confusion Matrix

$$\frac{T_p + T_N}{T_p + T_N + F_p + F_N} = \frac{60 + 20}{100} = \frac{80}{100}$$

