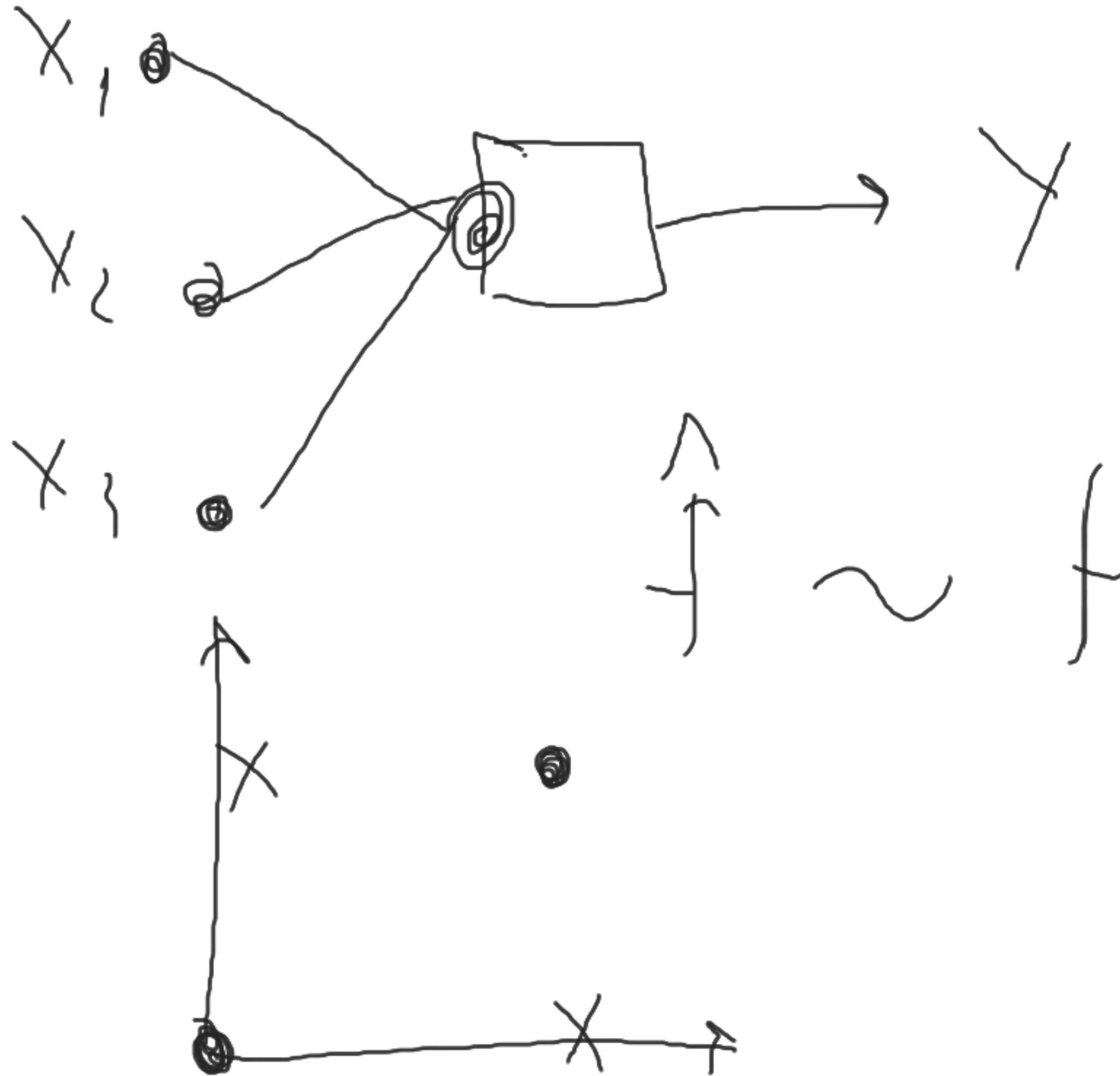


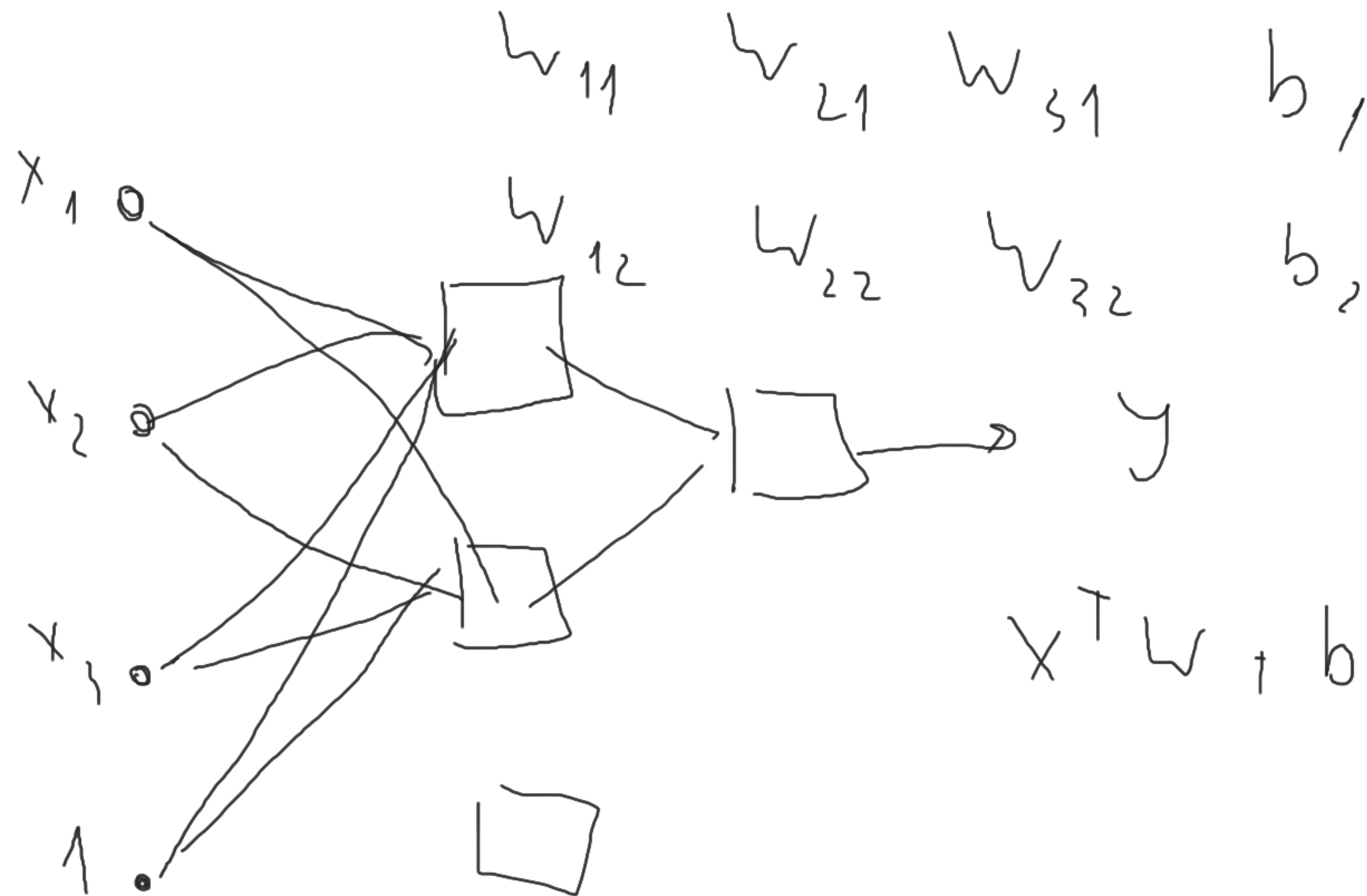
Perceptron

$$Z = w_1 x_1 + w_2 x_2 + w_3 x_3 = \sum w_i x_i$$

$$= x^T w + b$$



A	B	and	or	xor
T	T	T	T	T
T	F	F	T	F
F	T	F	T	F
F	F	F	F	F



$$x^T w + b = z$$

$$\sigma = \frac{1}{1 + e^{-z}}$$

$$\beta_0$$

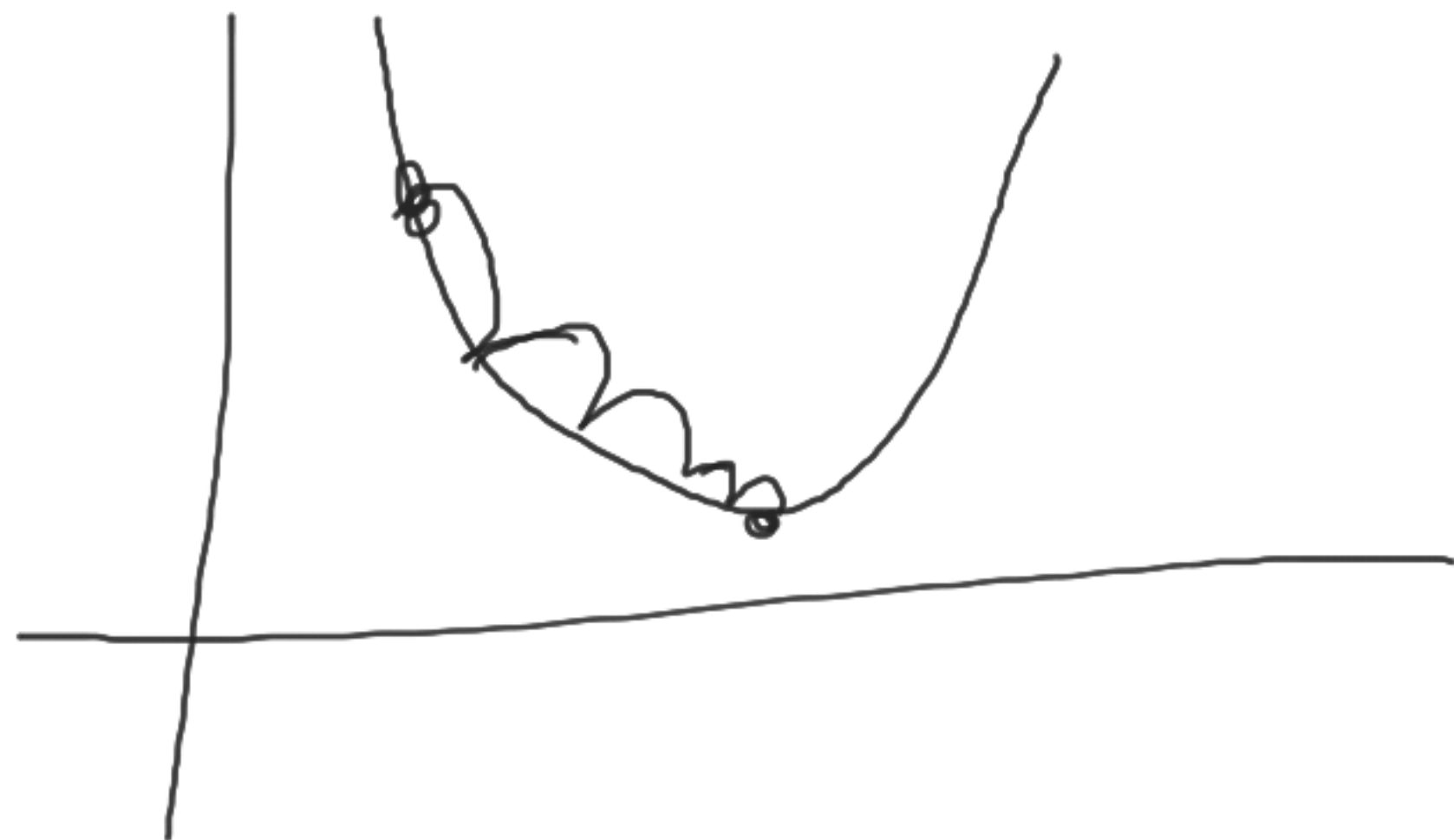
$$\beta_1 \dots \beta_n$$

$$b$$

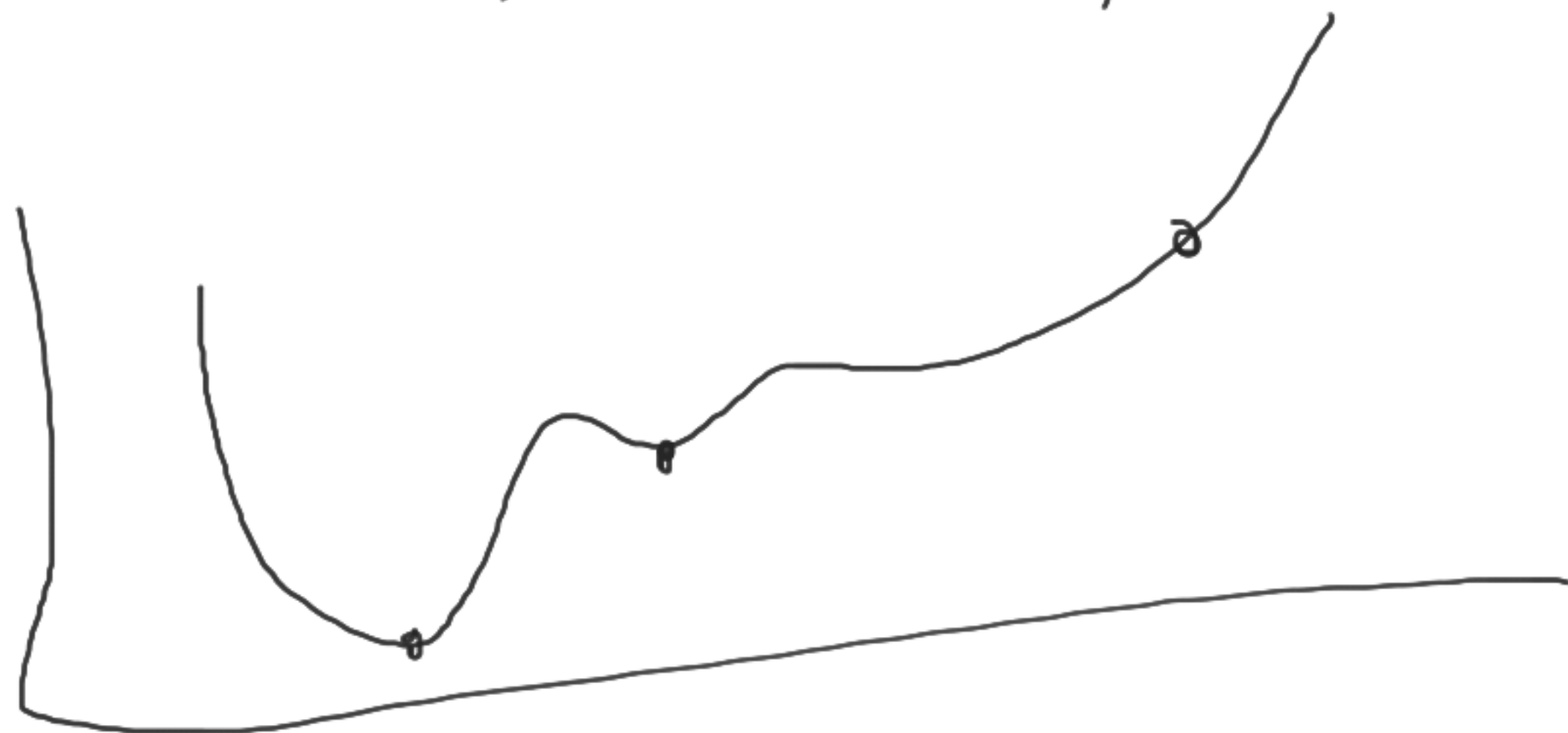
$$w_1 \dots w_n$$

$$z \rightarrow \sigma$$

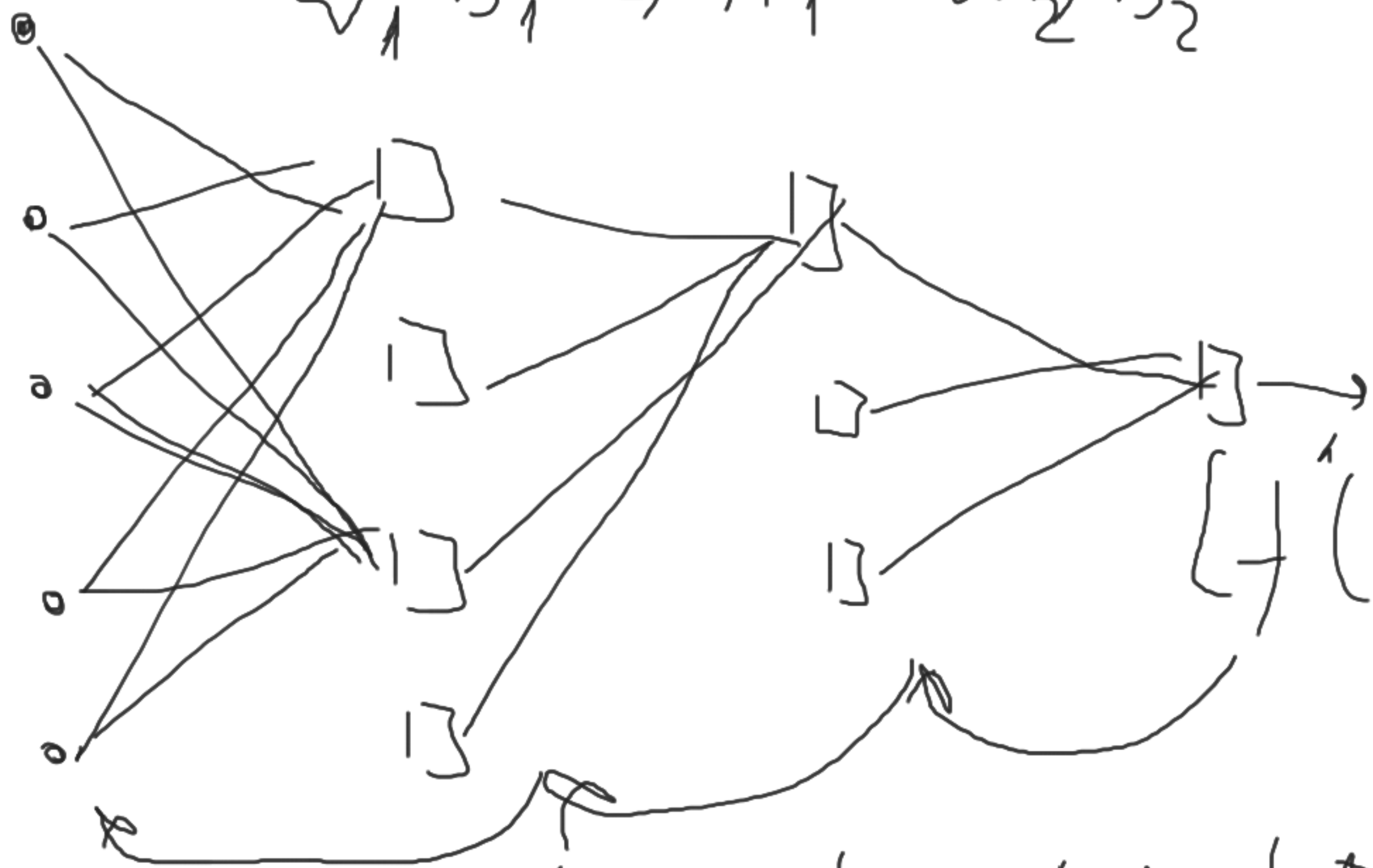
$$f \quad \hat{f}$$



$$f \sim \hat{f} + \alpha \hat{f}'$$



$$w_1 b_1 \rightarrow A_1 \rightarrow w_2 b_2 \rightarrow A_2 \rightarrow w_3 b_3 \rightarrow A_3$$



$$[f'(g(x))] = f'(g(x)) \cdot g'(x)$$

$$A_3 + q^x A_1 (Z_1 (A_2 (Z_2 (A_1 (Z_1))))')$$