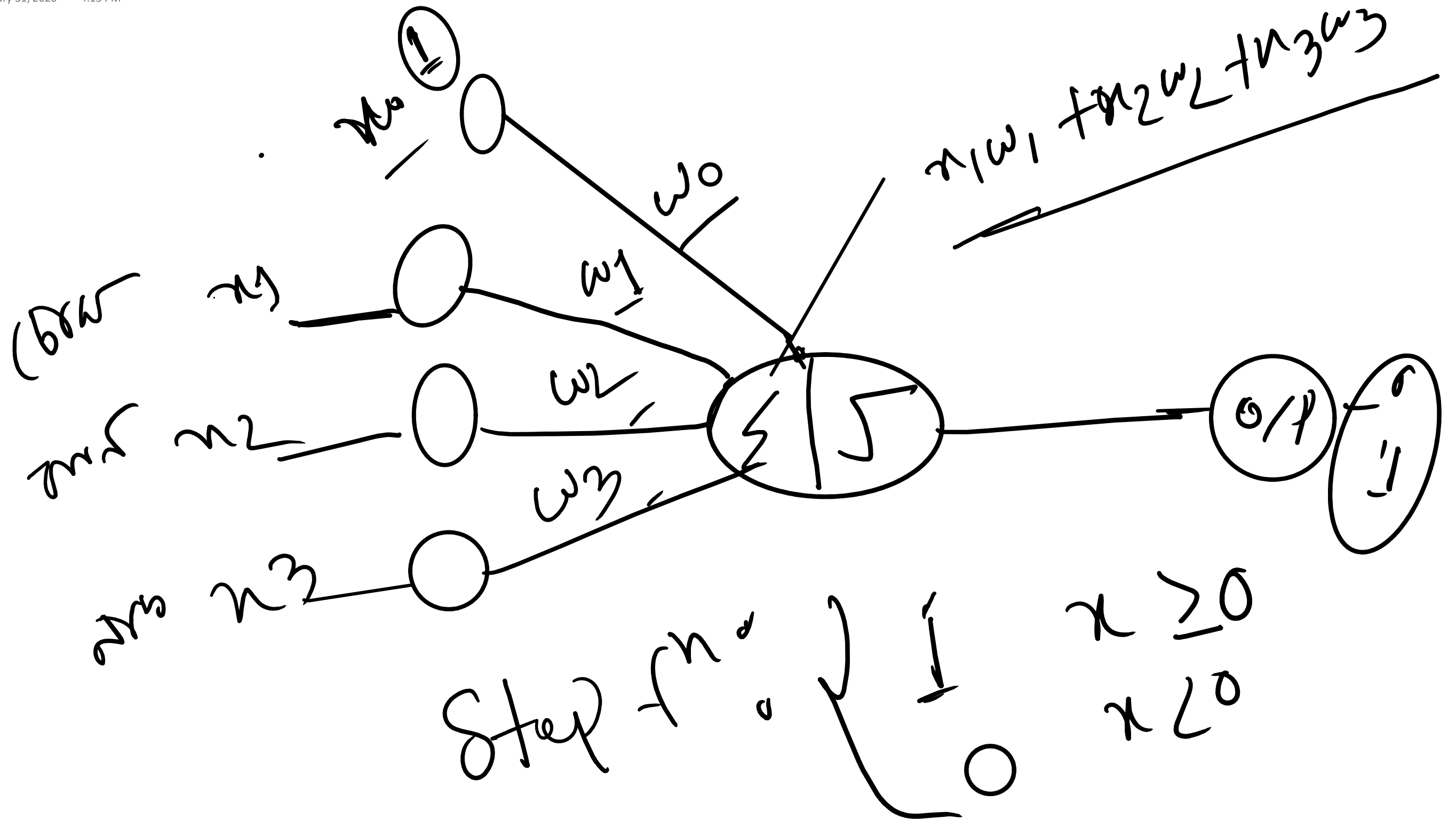


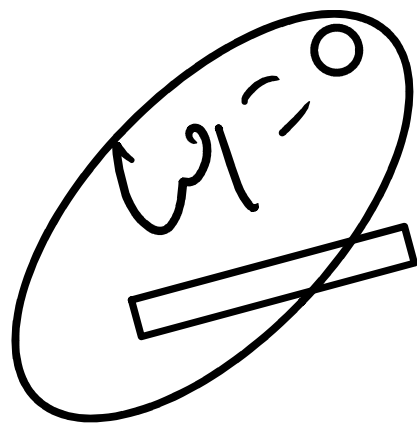
Perceptron

Saturday, January 31, 2026 4:15 PM



ex: $x_1w_1 + x_2w_2 + x_3w_3$

why multiply:



2 to

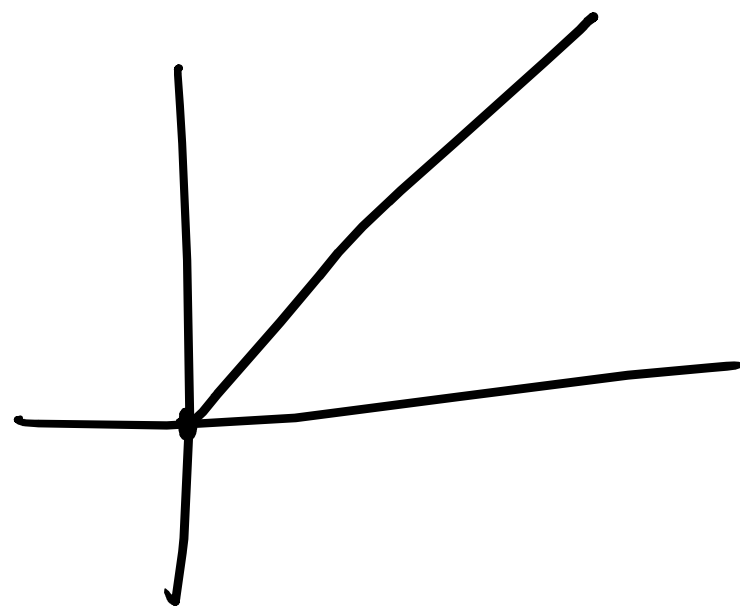
2 + 10 =

blo.

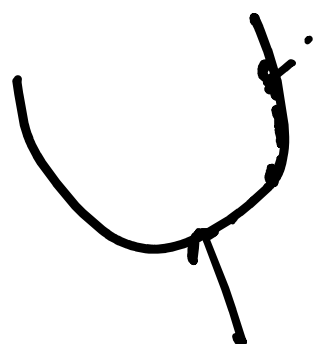
dead neuron

$$\rightarrow \text{decision} = w_1 \overset{\nearrow}{x_1} + w_2 \overset{\nearrow}{x_2} = 0$$

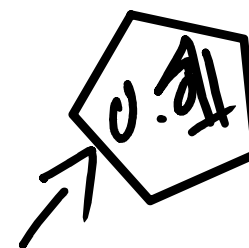
$$\begin{array}{|c|} \hline x > 0 \\ \hline x < 0 \\ \hline \end{array}$$



$$w_1 x_1 + w_2 x_2 + \textcircled{b} = \textcircled{2} > 0$$



weight updating formula



$$w_i = w_i + \eta (y - \hat{y}) x_i$$

17

0

$$w_{new} = \underline{w_{old}} + \eta (y - \hat{y}) x_i$$

✓ $\underline{w_{new}} = w_{old} + \eta (y - \hat{y}) x_i$

\hat{y}
 \uparrow
 predicted
 \downarrow
 input

$$\underline{b_{new}} = b_{old} + \eta (y - \hat{y})$$