

* Weights And Bias when sum up must be between $[-1..1]$ or else overflow.

* Input Range $[-5..5]$ NOT $[-1..1]$

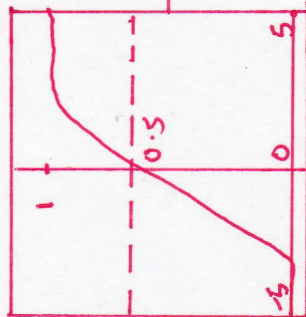
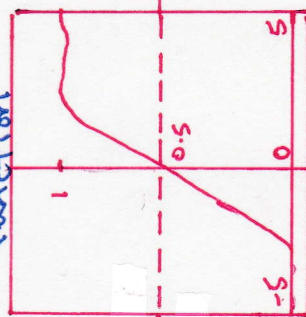
* Bias : positive And negative bias change the slope direction.

1.3

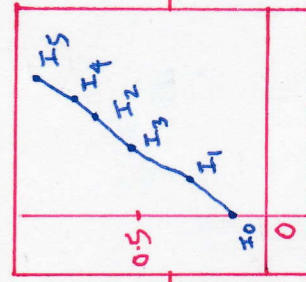
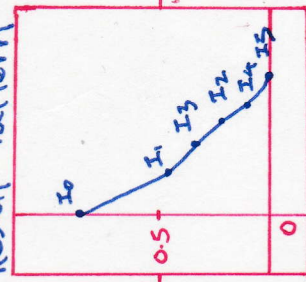
$w_1 \times 0.8$
 $b_1 + 1$

Input. $\left. \begin{matrix} 3.0 \\ 2.2 \\ 3.45 \\ 4.5 \end{matrix} \right\} \begin{matrix} \text{Need to Scale} \\ \text{Down to} \\ [-5..5] \end{matrix}$

Sigmoid Activation Function



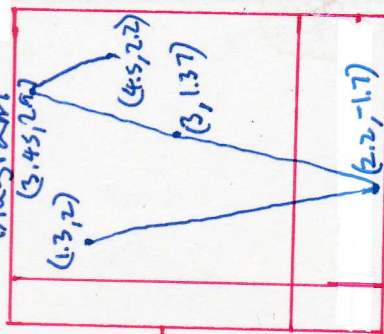
Result Pattern



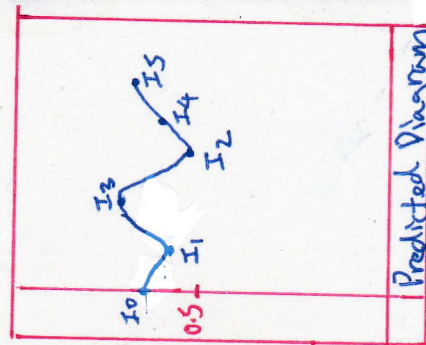
Sum

$+ (-1.3)$

Input And Output Diagram



Predicted Diagram



Assumption :

Input	Output
1.3	2
3.0	1.37
2.2	-1.7
3.45	2.9
4.5	2.2

* Remember need to scale back to the original value.