

QUESTION 4

$$w_1 = \begin{bmatrix} 0 \\ 1 \end{bmatrix} \quad w_2 = \begin{bmatrix} 1 \\ 0 \end{bmatrix}$$

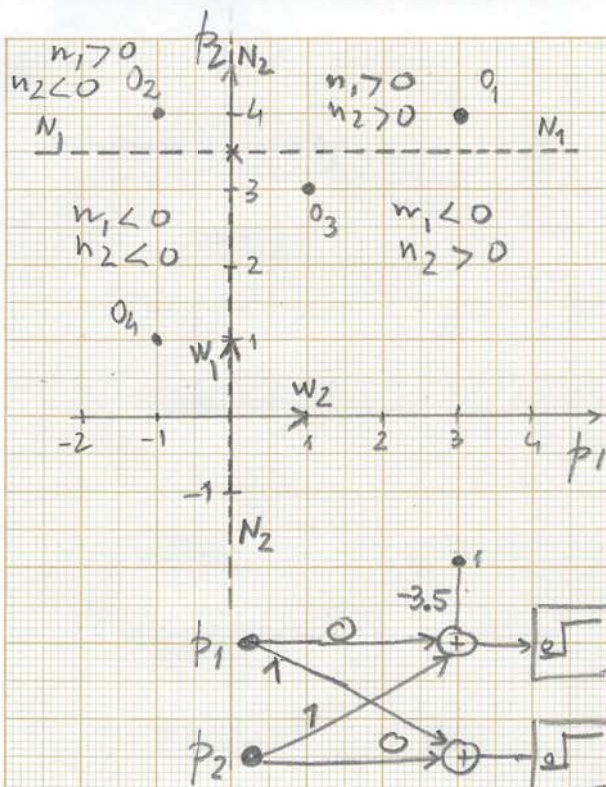
$$w_{11}p_1 + w_{12}p_2 + b_1 = 0 \quad p = [0 \ 3.5]^T$$

$$w_{11} \cdot 0 + 1 \times 3.5 + b_1 = 0 \Rightarrow b_1 = -3.5$$

$$b_2 = 0 \quad (N_2 \text{ contains the origin})$$

o_1	o_2	o_3	o_4
1	1	0	0
1	0	1	0

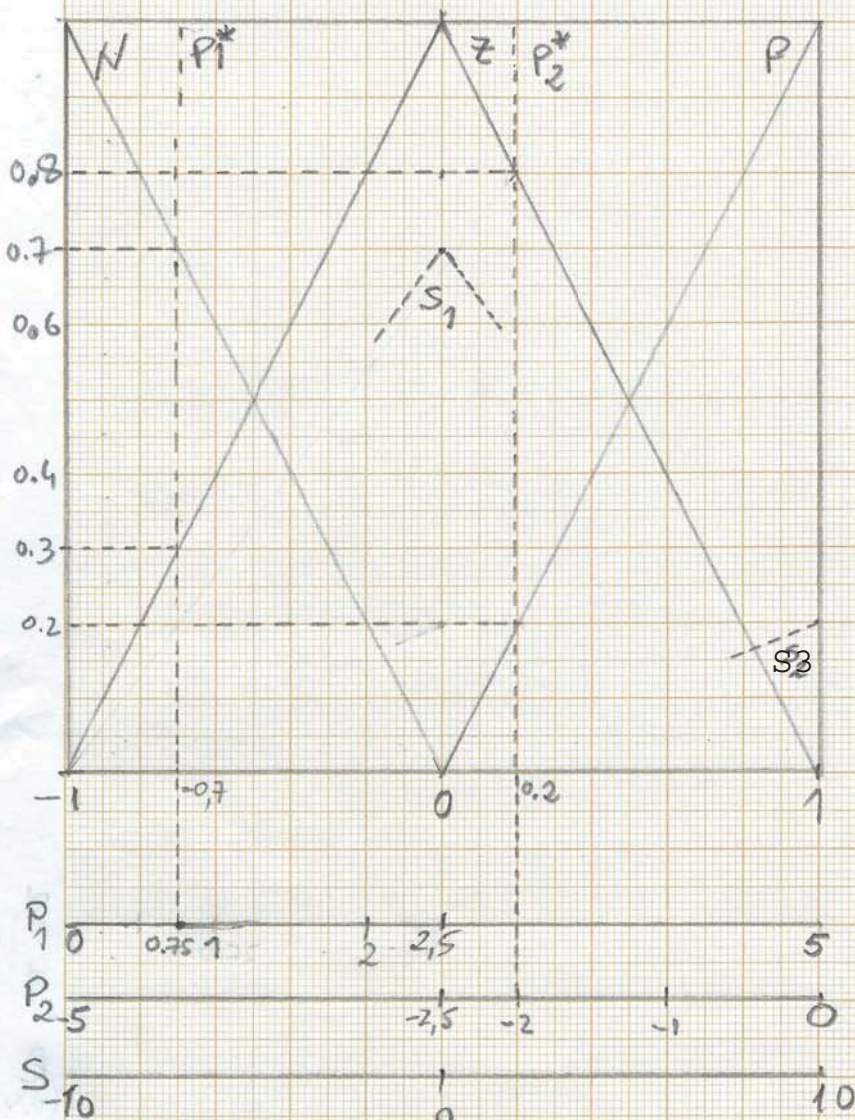
Remark: there are many solutions. this is one.



QUESTION 6

Remarks:

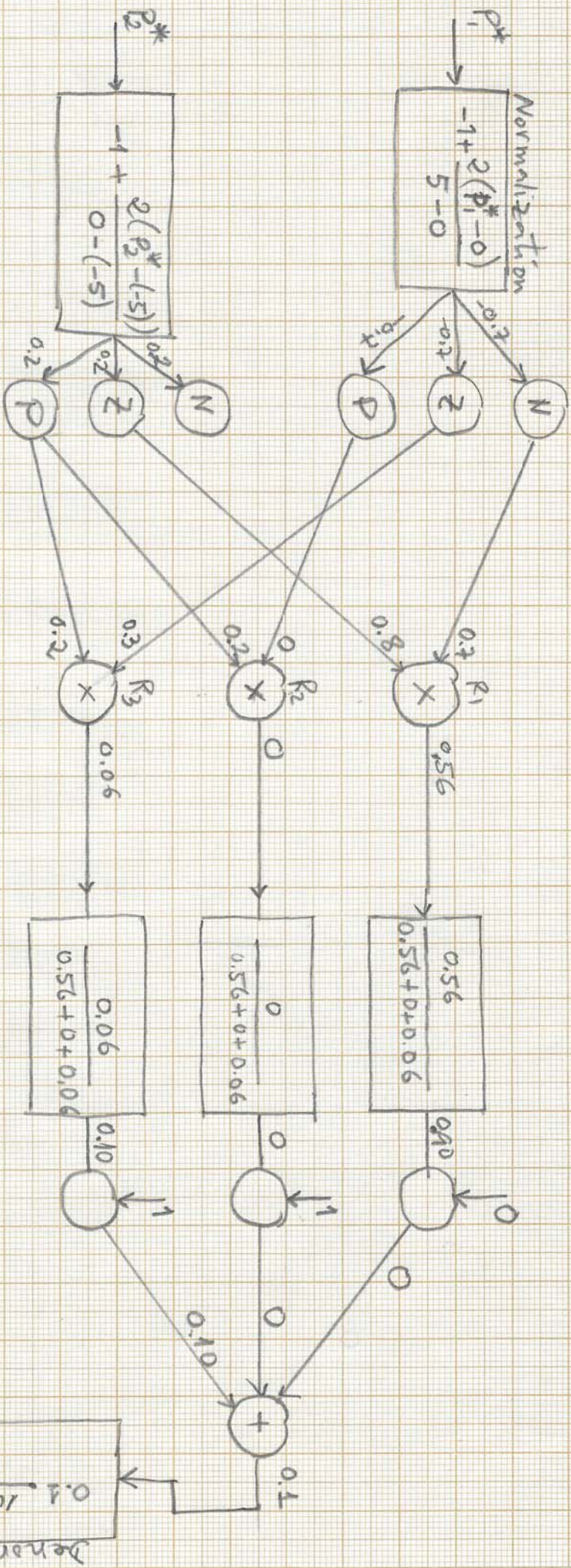
- 1- use graphical normalization (easy and clear)
- 2- design such that you can read in the figure with precision.
- 3- one figure is enough if sufficiently big to be clear.
- 4- see the text of the solution



(graphical normalization)

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QUESTION 7



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