

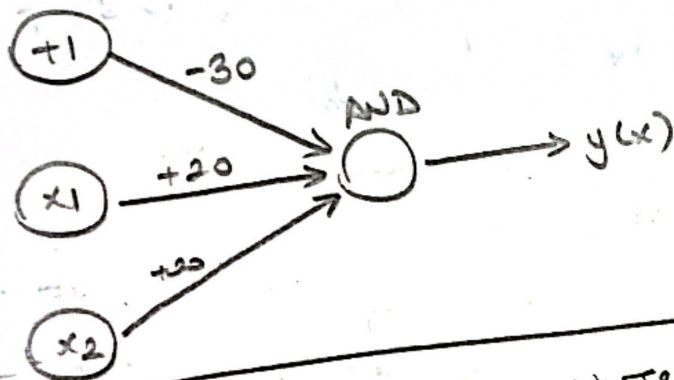
Question 2: We have to replicate AND function.

$$w = [-1, 1, 1] \quad (w = [b, w_1, w_2])$$

when input is 1, 1  $y' = -1 + 1 \times 1 + 1 \times 1 = 1$

when input is 1, 0  $y' = -1 + 1 \times 1 + 1 \times 0 = 0$

when input is 0, 0  $y' = 0$  as ReLU convert -1 to 0



$$\begin{aligned} b &= -30 \\ w_1 &= +20 \\ w_2 &= +20 \end{aligned}$$

Question 3: Each of the three inputs in the focus neuron contains a weight vector and bias.

The total of each inputs in this case

$$\rightarrow (1 \times 10 + 0 \times 3 + 5 \times 1) - 1 = 4$$

$$\text{Output} = f(4) = \underline{\underline{1}}$$

