

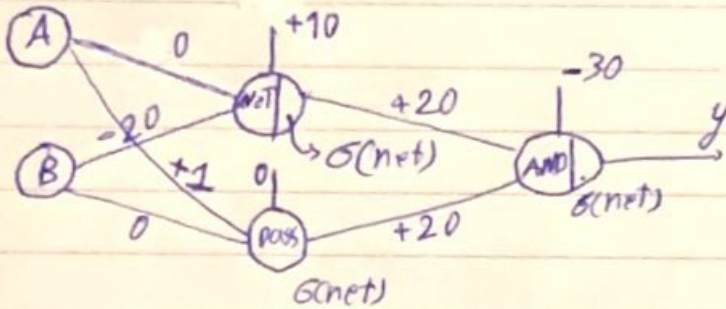
3 Lecture 07

4 perceptron-based multi-layer network with hard threshold:

6 A and (not B):

8 $A, B \in \{0, 1\}$ $y \in \{0, 1\}$

9 $\sigma(\text{net}) = \text{sign}(\text{net})$



15 A xor B = (A or B) and (A nand B)

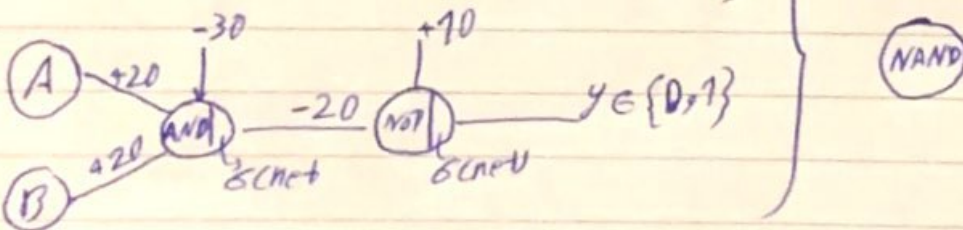
16 $A, B \in \{0, 1\}$

17 NAND:

18 (A nand B)

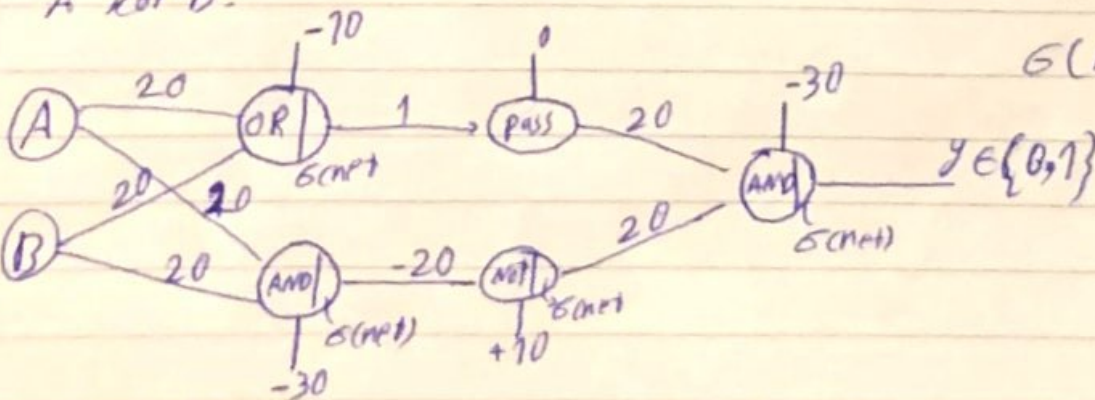
18 $A, B \in \{0, 1\}$

18 $\sigma(\text{net}) = \text{sign}(\text{net})$



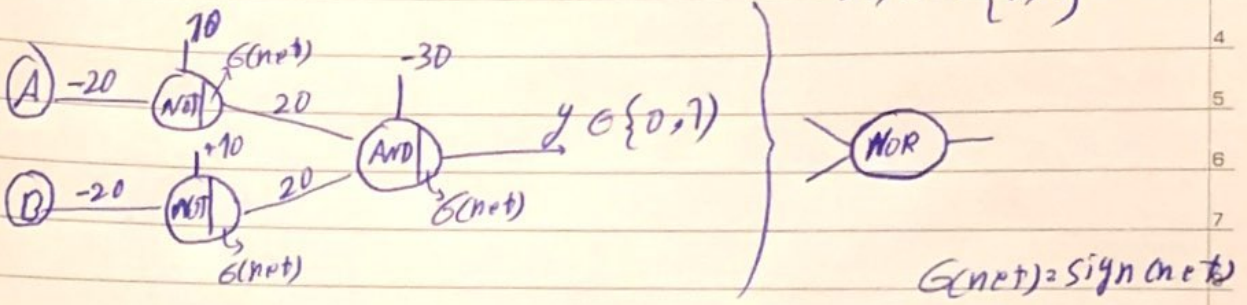
23 A xor B:

24 $\sigma(\text{net}) = \text{sign}(\text{net})$



$A \text{ nor } B = ((\text{not } A) \text{ and } (\text{not } B))$

$A, B \in \{0, 1\}$



$A \text{ xnor } B = (A \text{ and } B) \text{ or } (A \text{ nor } B)$

$A, B \in \{0, 1\}$

