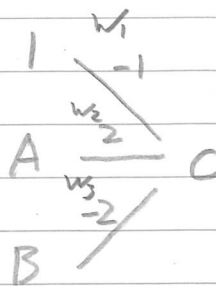


Week 9

Q1.1 $A \wedge \neg B$

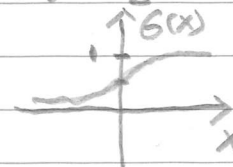
A	B	
0	0	0
0	1	0
1	0	1
1	1	0



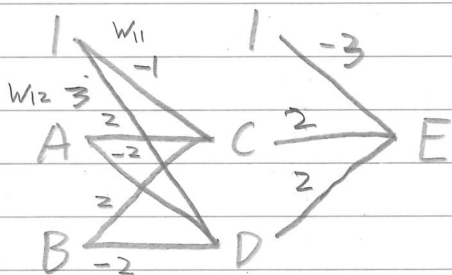
$$G(x) = \frac{1}{1 + e^{-x}}$$

A	B	C	$G(C) \approx$
0	0	-1	0
0	1	-3	0
1	0	1	1
1	1	-1	0

$$G(0) = \frac{1}{2} = 0.5$$



Q2.2 $A \oplus B$ XOR



bias ₁	w_{11}	-1	bias ₂	w_{21}	-3
	w_{12}	3	C	w_{22}	2
A	w_{13}	2	D	w_{23}	2
		14			-2
B	w_{15}	2			
	w_{16}	-2			

A	B	C	$G(C)$	D	$G(D)$	E	$G(E)$
0	0	-1	0	3	1	X -1	0
0	1	1	1	1	1	1	1
1	0	1	1	1	1	1	1
1	1	2	1	-1	0	-1	0