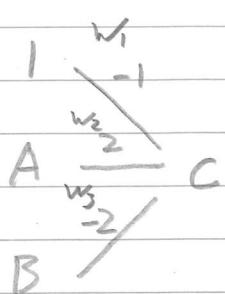


Week 9

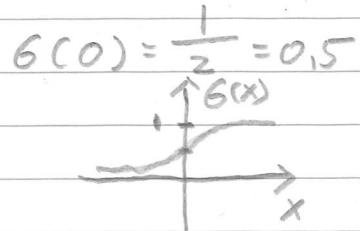
Q1.1 $A \wedge \neg B$

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

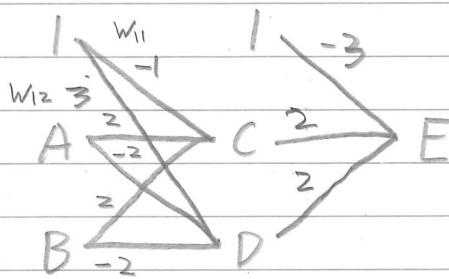


$$G(x) = \frac{1}{1 + e^{-x}}$$

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



Q2.2 $A \oplus B$ XOR



bias,	w_{11}	-1	bias,	w_{21}	= -3
	w_{12}	3		w_{22}	= 2
	w_{31}	2		w_{32}	= 2
	w_{41}	-2		w_{42}	= 2
	w_{15}	2		w_{16}	-2

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