

# Perceptron Based Multi-layer Network

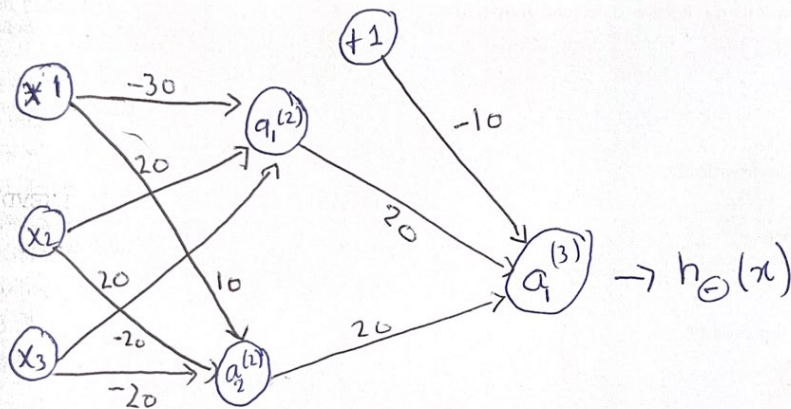
## "XNOR"

Perceptron based Multilayer consist of layers more than one, two, three and it continues. Here with an example we will use XNOR with 3 layer network

By combining Together

$x_1$  AND  $x_2$

\*  $x_1$  XNOR  $x_2$



$x_1$	$x_2$	$a_1^{(2)}$	$a_2^{(2)}$	$h_{\theta}(x)$
0	0	$0 - 30 + 0 = -30$	$0 + 0 + 0 = 0$	$1 - 10 + 0 + 20 = 20$
0	1	$0 - 30 + 20 = -10$	$0 + 0 + 20 = 20$	$0 - 10 + 0 + 0 = 0$
1	0	$0 - 30 + 20 = -10$	$0 + 20 + 0 = 20$	$0 = 10 + 0 + 0 = 0$
1	1	$1 - 30 + 20 = -10$	$0 + 20 + 20 = 40$	$1 = 10 + 20 + 0 = 30$

$x_1$  XNOR  $x_2$

(NOT  $x_1$ ) AND (NOT  $x_2$ )  
 so  $x_1$  AND  $x_2$