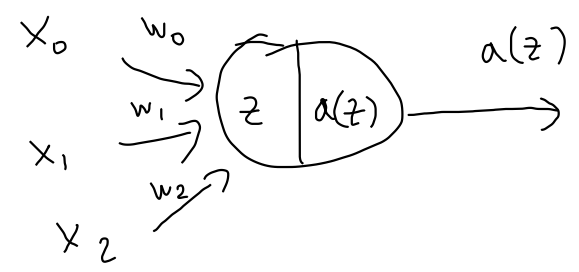
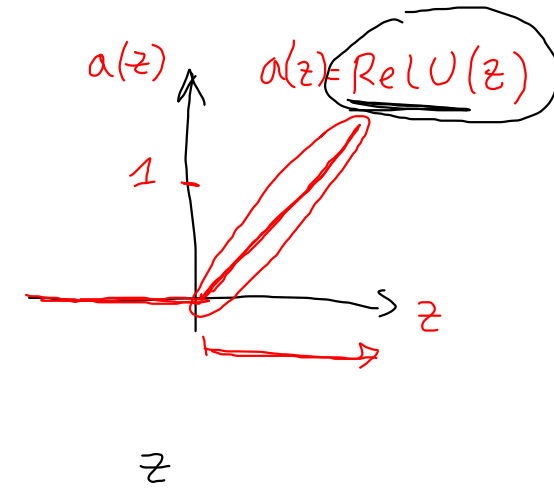


x_1	x_2	AND(x_1, x_2)	$z = x_1 + x_2 - 1$	$\max(0, z)$
0	0	0	-1	0
0	1	0	0	0
1	0	0	0	0
1	1	1	1	1



x_1	x_2	OR(x_1, x_2)	$\max(0, z)$
0	0	0	0
0	1	1	1
1	0	1	1
1	1	1	1

$z = x_1 + x_2 - 1$

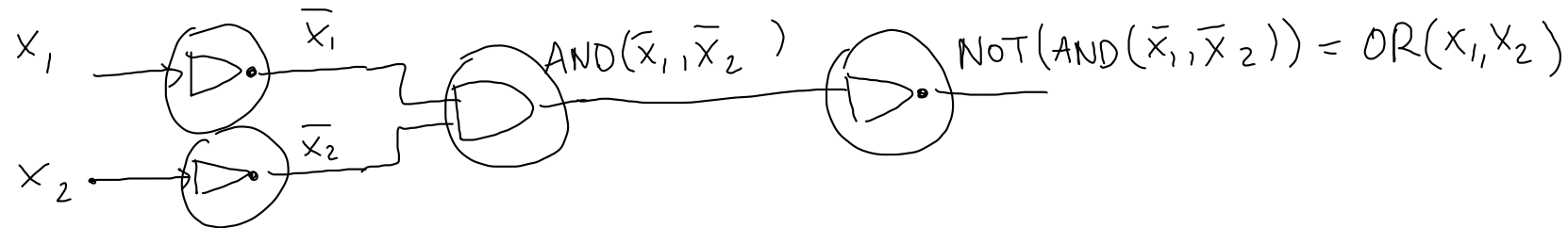
$a(z)$ coincide with AND(x_1, x_2)

x_1	NOT(x_1)	$z = 1 - x_1$	$\max(0, z)$
0	1	1	1
1	0	0	0

$$a|_{x=(1,1)} = \leftarrow z$$

$$= \underbrace{a|_{x=(0,1)}}_1 + \underbrace{a|_{x=(1,0)}}_1$$

$$\begin{aligned} \text{OR}(x_1, x_2) &= \text{NOT}(\text{AND}(\bar{x}_1, \bar{x}_2)) \\ &= \overline{\bar{x}_1 \wedge \bar{x}_2} = x_1 \vee x_2 \end{aligned}$$



$$x_1 + x_2 + 1$$

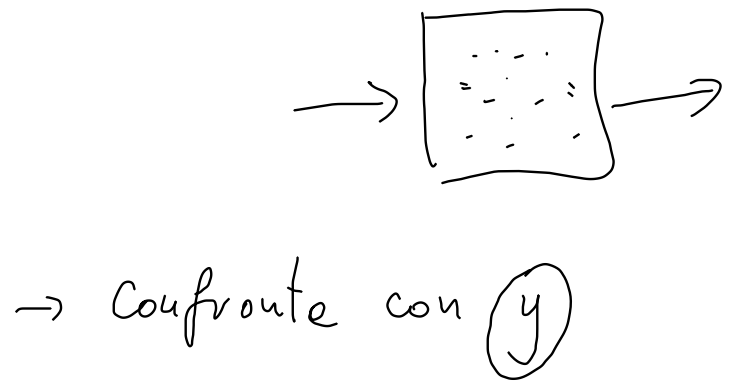
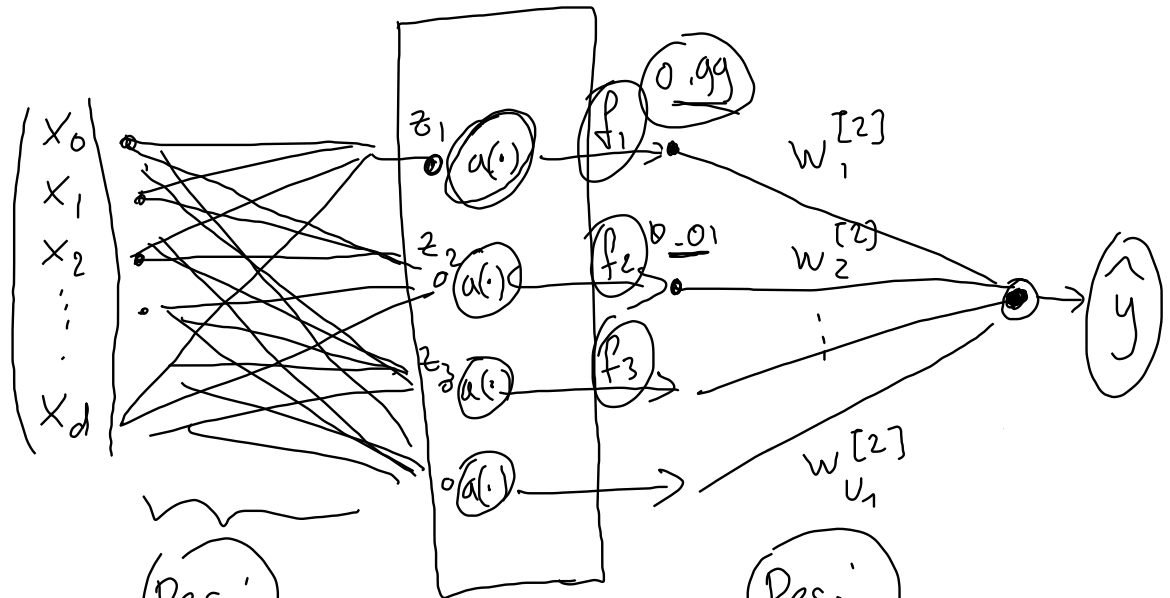
Esempio: $a(z) = \text{sgn}(z) = \begin{cases} +1 & \text{se } z > 0 \\ 0 & \text{se } z = 0 \\ -1 & \text{se } z < 0 \end{cases}$

True : +1

False : -1

x_1	x_2	$\text{AND}(x_1, x_2)$	$z = x_1 + x_2 - 1$	$a(z) = \text{sgn}(z)$
-1	-1	-1	-3	-1
-1	+1	-1	-1	-1
+1	-1	-1	-1	-1
+1	+1	+1	+1	+1

$\text{OR}(x_1, x_2)$	$z = x_1 + x_2 + 1$	$a(z) = \text{sgn}(z)$
-1	-1	-1
+1	+1	+1
+1	+1	+1
+1	+3	+1



\mathbb{R}^{d+1}
 \mathbb{R}^{d+1}
 $\mathbb{R}^{U_1 \times (d+1)}$

$\ni \rightarrow w_1^{[1]}$
 $\ni \rightarrow w_2^{[1]}$
 \vdots
 $w_{U_1}^{[1]}$

$\ni W^{[1]}$

Pesi

Strato
(U_1 unità)

Pesi

$w_1^{[2]}$
 $w_2^{[2]}$
 $w_{U_1}^{[2]}$

