

Q1.

$$\begin{matrix} x_1 \\ x_2 \end{matrix} \begin{bmatrix} 2 \\ 1 \end{bmatrix}$$

assume $e \approx 3$

1	1	-1	2
1	-1	-1	0

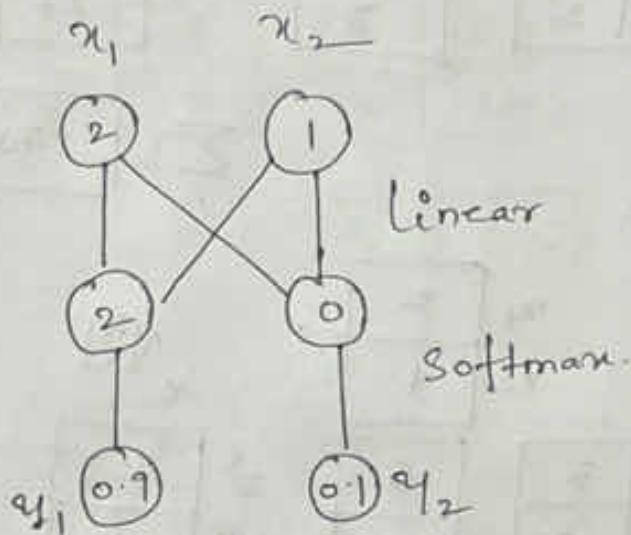
$$e^{\wedge ?}$$

$$? / \Sigma$$

$$\begin{matrix} 3^2 = 9 \\ 3^0 = 1 \end{matrix}$$

$$\begin{matrix} 9/10 & y_1 = 0.9 \\ 1/10 & y_2 = 0.1 \end{matrix}$$

$$\Sigma = \begin{bmatrix} 9+1 \\ = 10 \end{bmatrix}$$



Q2

1	1	0
1	-1	0

$$\begin{matrix} x_1 \\ x_2 \end{matrix} \begin{bmatrix} 2 \\ 1 \end{bmatrix}$$

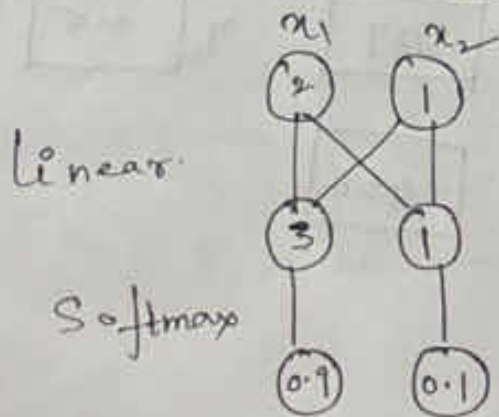
$$e^{\wedge ?}$$

$$? / \Sigma$$

$$\begin{matrix} 3^3 = 27 \\ 3^1 = 3 \end{matrix}$$

$$\begin{matrix} 27/30 & y_1 \\ 3/30 & y_2 \end{matrix}$$

$$\Sigma = \begin{bmatrix} 30 \end{bmatrix}$$



Q3. assume: $e \approx 3$

1	1	1
1	-1	1

x_1	2
x_2	1
	4
	2

$e^{\wedge[?]}$	
3^4	81
3^2	9

$[?]/\Sigma$	
y_1	0.9 81/90
y_2	0.1 9/90

$$\Sigma = [90]$$

Q4. assume: $e \approx 3$

1	1	2
1	-1	2

x_1	2
x_2	1
	5
	3

$e^{\wedge[?]}$	
3^5	243
3^3	27

$[?]/\Sigma$	
y_1	0.9 243/270
y_2	0.1 27/270

$$\Sigma = [270]$$

Q5. assume: $e \approx 3$

1	1	3
1	-1	3

x_1	2
x_2	1
	6
	4

$e^{\wedge[?]}$	
3^6	729
3^4	81

$[?]/\Sigma$	
y_1	0.9 729/810
y_2	0.1 81/810

$$\Sigma = [810]$$

Q6. assume: $e \approx 3$

1	1	3
1	-1	5

x_1	2
x_2	1
	6
	6

$e^{\wedge[?]}$	
3^6	729
3^6	729

$[?]/\Sigma$	
y_1	0.5 729/1458
y_2	0.5 729/1458

$$\Sigma = [1458]$$

Q₇

assume: $e \approx 3$

1	1	2
1	-1	4

x_1	2
x_2	1
	5
	5

$$e \begin{array}{|c|} \hline \wedge ? \\ \hline \end{array}$$

$$\begin{array}{r} 3^5 \\ 3^5 \end{array} \begin{array}{|c|} \hline 243 \\ \hline 243 \\ \hline \end{array}$$

$$\Sigma \begin{array}{|c|} \hline 486 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline ? \\ \hline \end{array} / \Sigma$$

$$\begin{array}{r} 243 \\ \hline 486 \end{array} \begin{array}{|c|} \hline 0.5 \\ \hline 0.5 \\ \hline \end{array} \begin{array}{l} y_1 \\ y_2 \end{array}$$

Q₈

assume: $e \approx 3$

1	1	0
1	-1	2

x_1	2
x_2	1
	3
	3

$$e \begin{array}{|c|} \hline \wedge ? \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ 3 \\ 3 \\ 3 \end{array} \begin{array}{|c|} \hline 27 \\ \hline 27 \\ \hline \end{array}$$

$$\Sigma \begin{array}{|c|} \hline 54 \\ \hline \end{array}$$

$$[?] / \Sigma$$

$$\begin{array}{r} 27/54 \\ 27/54 \end{array} \begin{array}{|c|} \hline 0.5 \\ \hline 0.5 \\ \hline \end{array} \begin{array}{l} y_1 \\ y_2 \end{array}$$

Q₉

assume: $e \approx 3$

1	1	0
1	-1	1

x_1	2
x_2	1
	3
	2

$$e \begin{array}{|c|} \hline \wedge ? \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ 3 \\ 3^2 \\ 3 \end{array} \begin{array}{|c|} \hline 27 \\ \hline 9 \\ \hline \end{array}$$

$$\Sigma \begin{array}{|c|} \hline 36 \\ \hline \end{array}$$

$$[?] / \Sigma$$

$$\begin{array}{r} 27/36 \\ 9/36 \end{array} \begin{array}{|c|} \hline 0.75 \\ \hline 0.25 \\ \hline \end{array} \begin{array}{l} y_1 \\ y_2 \end{array}$$

Q₁₀

assume: $e \approx 3$

1	1	-1
1	-1	0

	2
	1
	2
	1

$$e \begin{array}{|c|} \hline \wedge ? \\ \hline \end{array}$$

$$\begin{array}{r} 3^2 \\ 3^1 \\ 3^1 \end{array} \begin{array}{|c|} \hline 9 \\ \hline 3 \\ \hline \end{array}$$

$$\Sigma \begin{array}{|c|} \hline 12 \\ \hline \end{array}$$

$$[?] / \Sigma$$

$$\begin{array}{r} 9/12 \\ 3/12 \end{array} \begin{array}{|c|} \hline 0.75 \\ \hline 0.25 \\ \hline \end{array} \begin{array}{l} y_1 \\ y_2 \end{array}$$

Q₁₁ assume: $c \approx 3$

x_1	2
x_2	1

1	1	-3
1	-1	-1
1	0	-2
0	1	-1

0
0
0
0

$e^{1/3}$
1
1
1
1

y_1	0.25	1/4
y_2	0.25	1/4
y_3	0.25	1/4
y_4	0.25	1/4

Σ 4

Q₁₂ assume: $c \approx 3$

x_1	2
x_2	1

1	1	-4
1	-1	-2
1	0	-3
0	1	-2

-1
-1
-1
-1

$e^{1/3}$
1/3
1/3
1/3
1/3

y_1	0.25	$(1/3) \div (4/3) =$
y_2	0.25	$(1/3) \div (4/3) =$
y_3	0.25	$(1/3) \div (4/3) =$
y_4	0.25	$(1/3) \div (4/3) =$

Σ 4/3