

Bài 1:

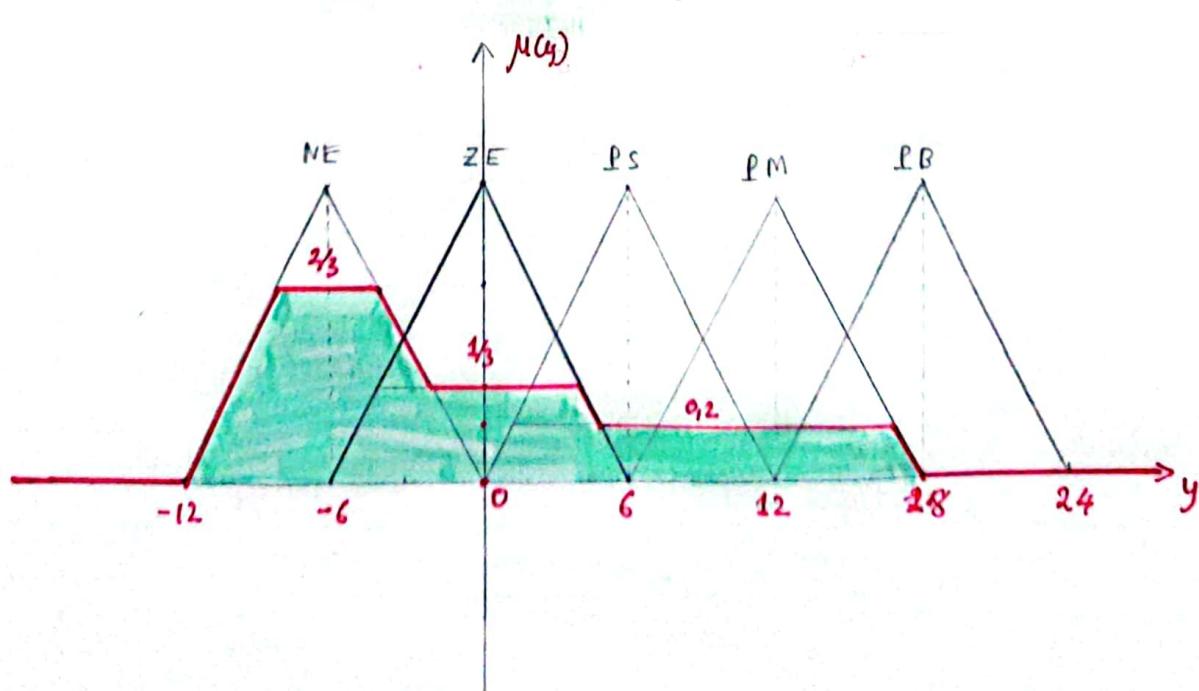
1.1 Sử dụng phuong pháp suy Luận Max-Min  $x_1' = -8$ ,  $x_2' = 7$

a.

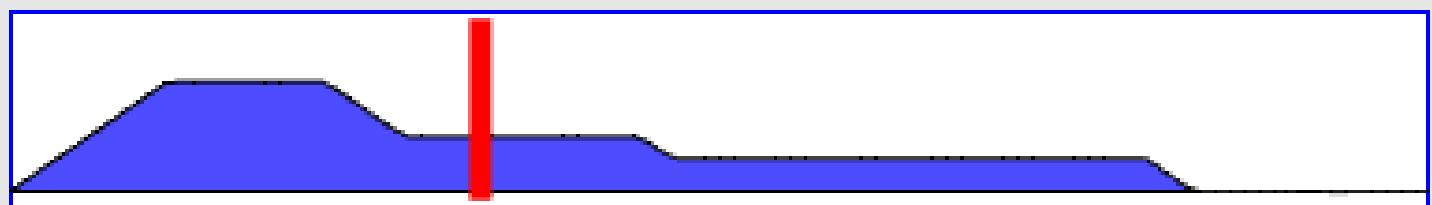
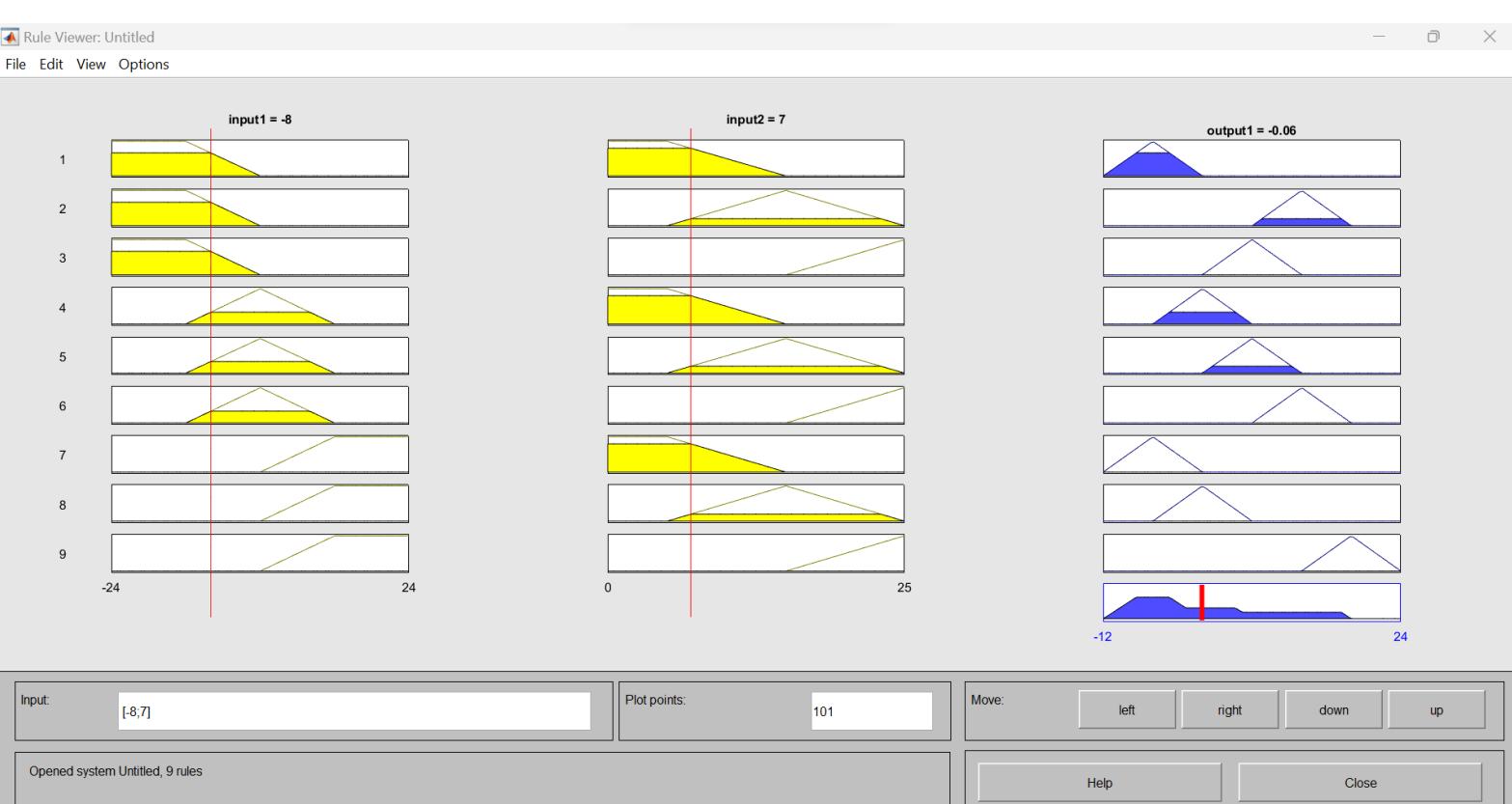
$$x_1' = -8 \Rightarrow \begin{bmatrix} \mu_{NE}(x_1') \\ \mu_{ZE}(x_1') \\ \mu_{LO}(x_1') \end{bmatrix} = \begin{bmatrix} \frac{2}{3} \\ \frac{1}{3} \\ 0 \end{bmatrix}$$

$$x_2' = 7 \Rightarrow \begin{bmatrix} \mu_{LO}(x_2') \\ \mu_{ME}(x_2') \\ \mu_{PS}(x_2') \end{bmatrix} = \begin{bmatrix} 0,8 \\ 0,2 \\ 0 \end{bmatrix}$$

$x_1$	$x_2$	$y$	$d_1$	$d_2$	$\beta = \text{MIN}(d_1, d_2)$
NE	LO	NE	$\frac{2}{3}$	0,8	$\frac{2}{3}$
NE	ME	PM	$\frac{2}{3}$	0,2	0,2
ZE	LO	ZE	$\frac{1}{3}$	0,8	$\frac{1}{3}$
ZE	ME	PS	$\frac{1}{3}$	0,2	0,2



## Kiểm tra lại kết quả suy luận dùng Matlab



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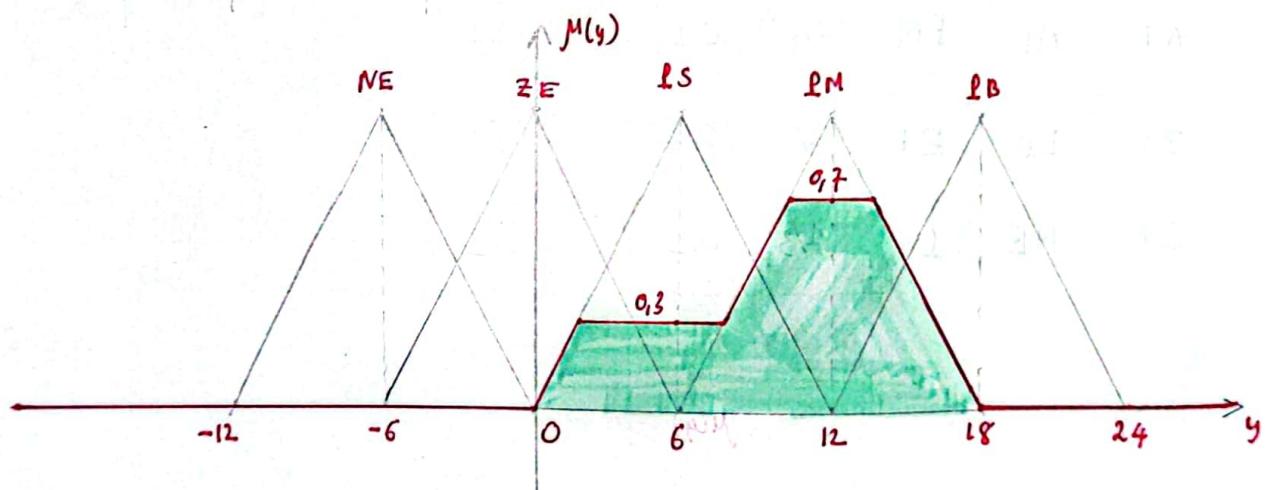
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1.1.b. Sử dụng phép suy luận MAX-MIN,  $x_1' = -13$ ,  $x_2 = 18$

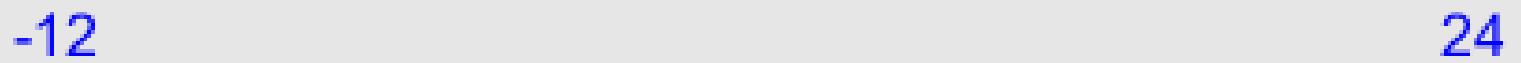
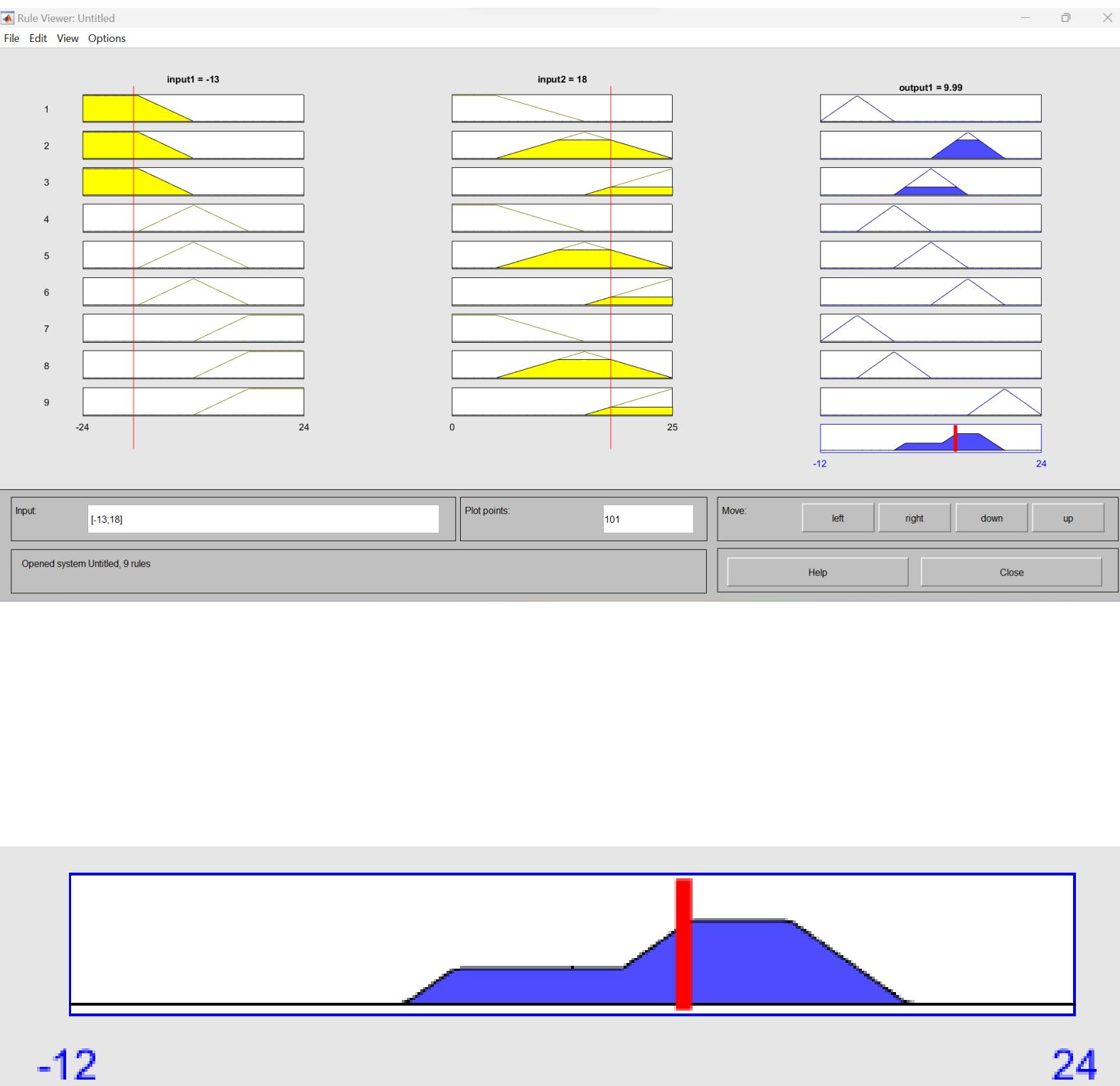
$$x_1' = -13 \Rightarrow \begin{bmatrix} M_{NE}(x_1') \\ M_{ZE}(x_1') \\ M_{PO}(x_1') \end{bmatrix} = \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$$

$$x_2' = 18 \Rightarrow \begin{bmatrix} M_{LO}(x_2') \\ M_{ME}(x_2') \\ M_{HI}(x_2') \end{bmatrix} = \begin{bmatrix} 0 \\ 0,7 \\ 0,3 \end{bmatrix}$$

$x_1$	$x_2$	$y$	$d_1$	$d_2$	$B = \min(d_1, d_2)$
NE	ME	PM	1	0,7	0,7
NE	HI	PS	1	0,3	0,3



## Kiểm tra lại kết quả suy luận dùng Matlab



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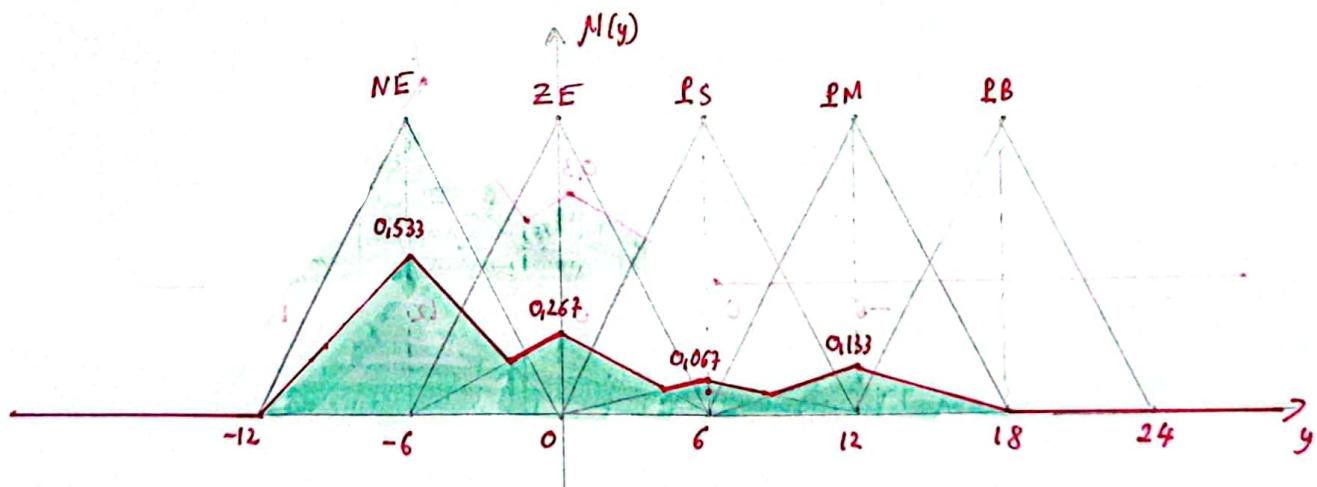
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1.2.  $\alpha$ , sử dụng phương pháp suy luận MAX-PROD,  $x_1' = -8$ ,  $x_2' = 7$

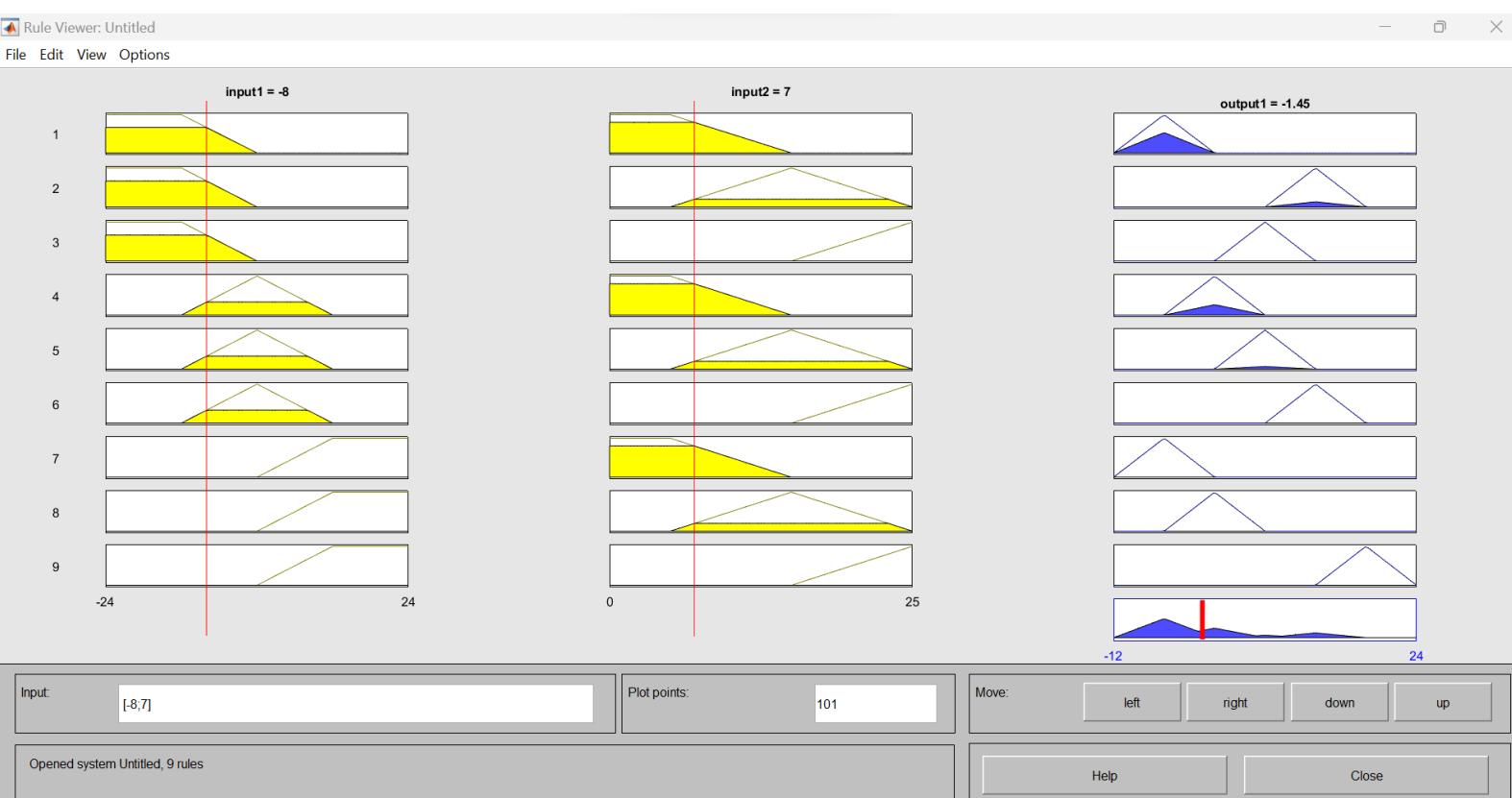
$$x_1' = -8 \Rightarrow \begin{bmatrix} \mu_{NE}(x_1') \\ \mu_{ZE}(x_1') \\ \mu_{LO}(x_1') \end{bmatrix} = \begin{bmatrix} 2/3 \\ 1/3 \\ 0 \end{bmatrix}$$

$$x_2' = 7 \Rightarrow \begin{bmatrix} \mu_{LO}(x_2') \\ \mu_{ME}(x_2') \\ \mu_{HS}(x_2') \end{bmatrix} = \begin{bmatrix} 0,8 \\ 0,2 \\ 0 \end{bmatrix}$$

$x_1$	$x_2$	$y$	$d_1$	$d_2$	$\beta = \text{PROD}(d_1, d_2)$
NE	LO	NE	2/3	0,8	0,533
NE	ME	PM	2/3	0,2	0,133
ZE	LO	ZE	1/3	0,8	0,267
ZE	ME	PS	1/3	0,2	0,067



## Kiểm tra lại kết quả suy luận dùng Matlab

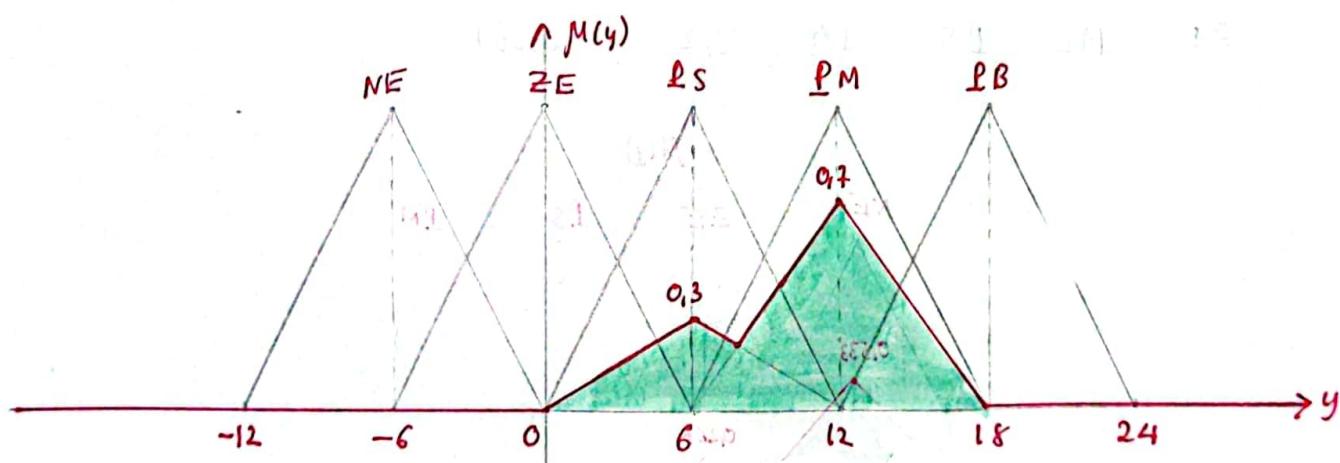


1.2. b. Sử dụng phuong pháp suy luận MAX-PROD,  $x_1' = -13$ ,  $x_2' = 18$

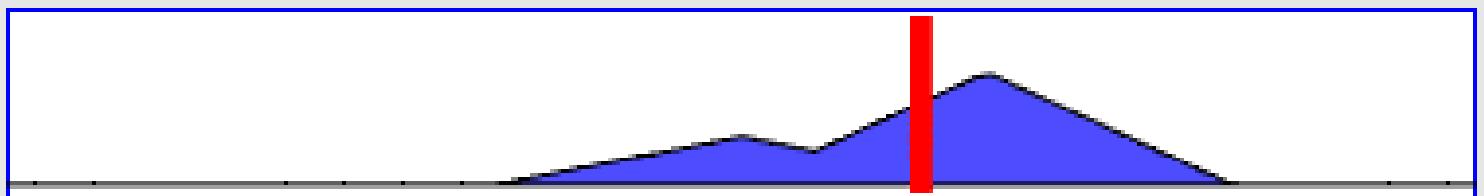
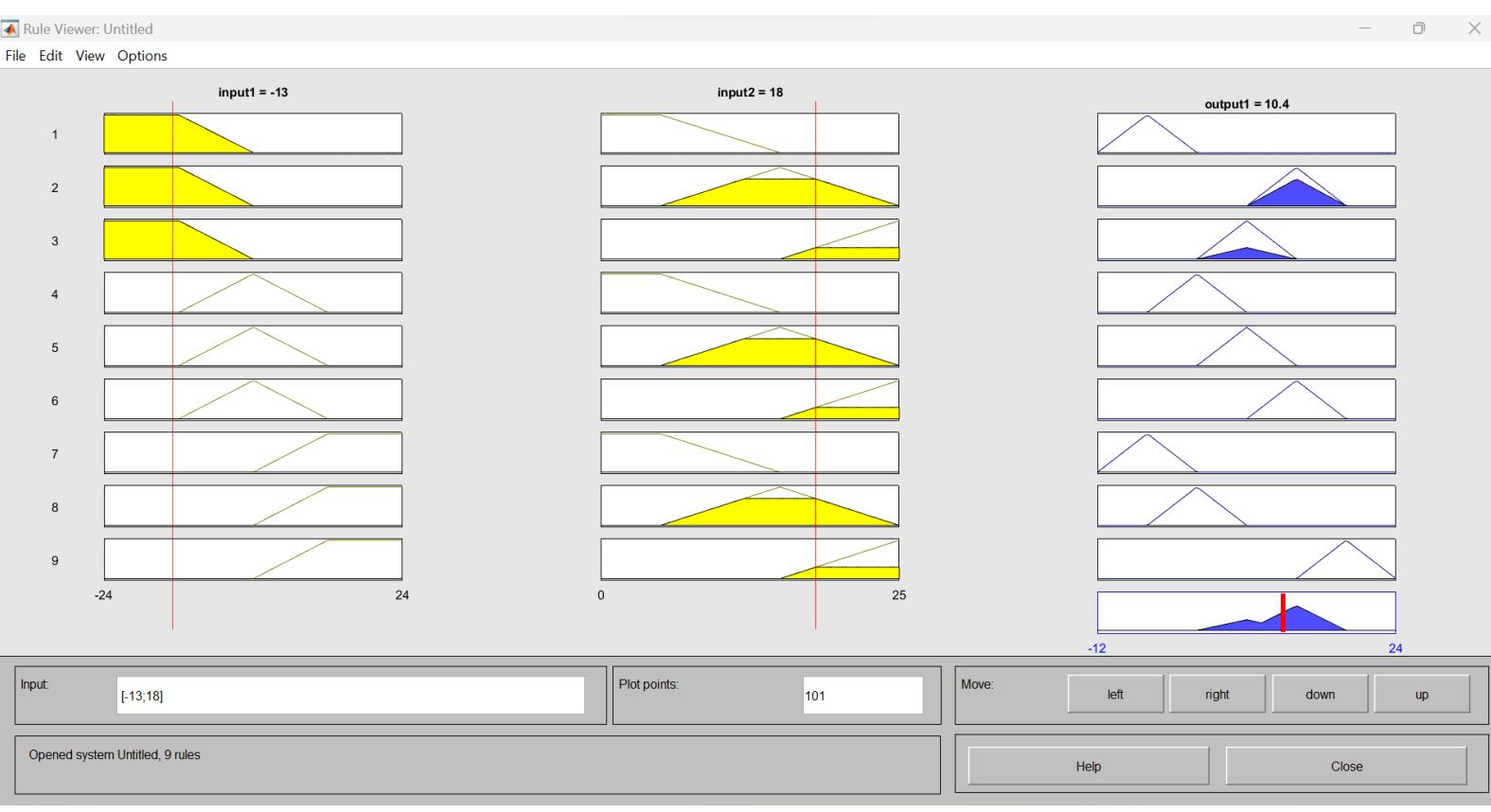
$$x_1' = -13 \Rightarrow \begin{bmatrix} M_{NE}(x_1') \\ M_{ZE}(x_1') \\ M_{LO}(x_1') \end{bmatrix} = \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$$

$$x_2' = 18 \Rightarrow \begin{bmatrix} M_{LO}(x_2') \\ M_{ME}(x_2') \\ M_{HI}(x_2') \end{bmatrix} = \begin{bmatrix} 0 \\ 0,7 \\ 0,3 \end{bmatrix}$$

$x_1$	$x_2$	$y$	$d_1$	$d_2$	$\beta = \text{PROD}(d_1, d_2)$
NE	ME	PM	1	0,7	0,7
NE	HI	PS	1	0,3	0,3



## Kiểm tra lại kết quả suy luận dùng Matlab



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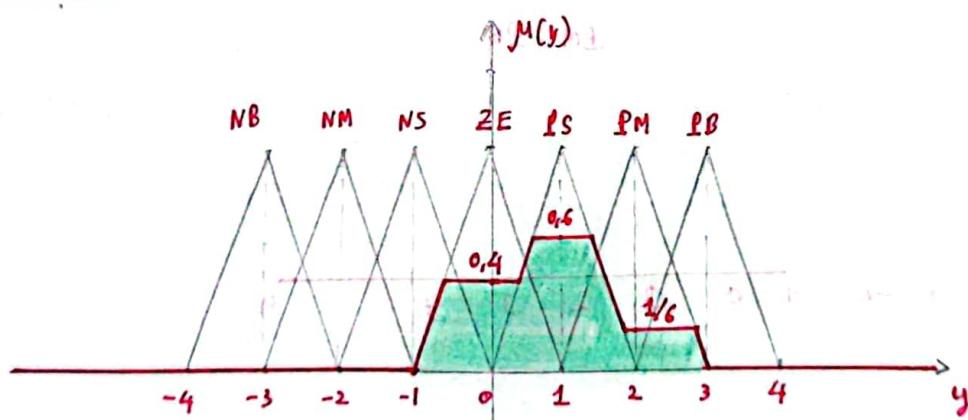
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2.1.a Sử dụng phương pháp suy luận MAX-MIN,  $x_1' = -0,5$ ,  $x_2' = 0,5$

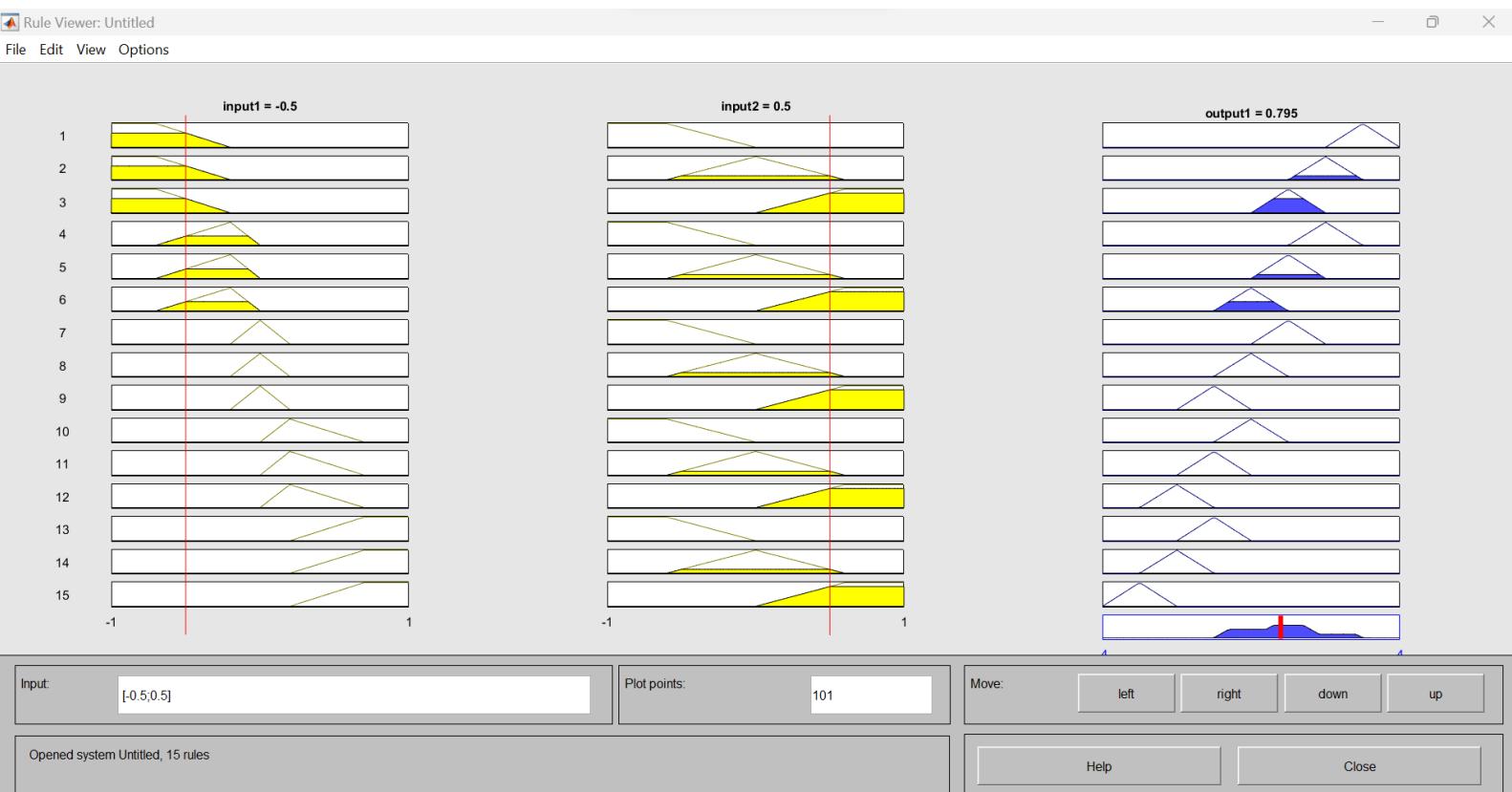
$$x_1' = -0,5 \Rightarrow \begin{bmatrix} M_{NB}(x_1') \\ M_{NS}(x_1') \\ M_{ZE}(x_1') \\ M_{PS}(x_1') \\ M_{PB}(x_1') \end{bmatrix} = \begin{bmatrix} 0,6 \\ 0,4 \\ 0 \\ 0 \\ 0 \end{bmatrix}$$

$$x_2' = 0,5 \Rightarrow \begin{bmatrix} M_{NE(x_2')} \\ M_{ZE(x_2')} \\ M_{PO(x_2')} \end{bmatrix} = \begin{bmatrix} 0 \\ 1/6 \\ 5/6 \end{bmatrix}$$

$x_1$	$x_2$	$y$	$\lambda_1$	$\lambda_2$	$\beta = \min(\lambda_1, \lambda_2)$
NB	ZE	PM	0,6	1/6	1/6
NB	PO	PS	0,6	5/6	0,6
NS	ZE	PS	0,4	1/6	1/6
NS	PO	ZE	0,4	5/6	0,4



## Kiểm tra lại kết quả suy luận dùng Matlab



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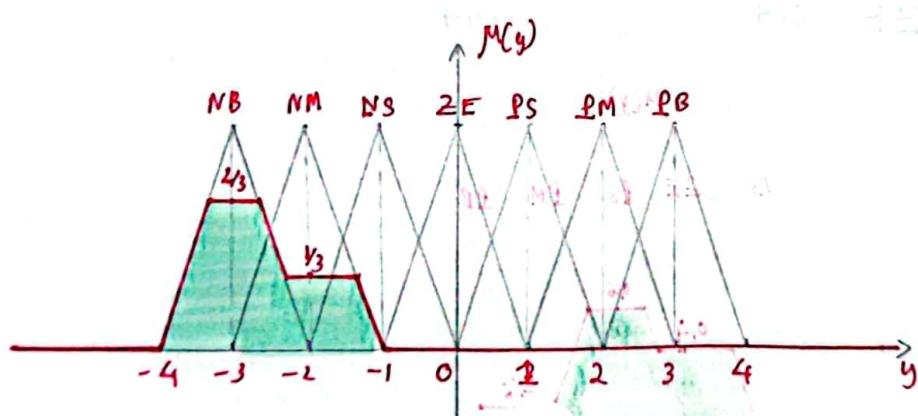
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2.1.b. Sử dụng phương pháp suy luận Max-Min,  $x_1 = 0,8$ ,  $x_2 = 0,4$

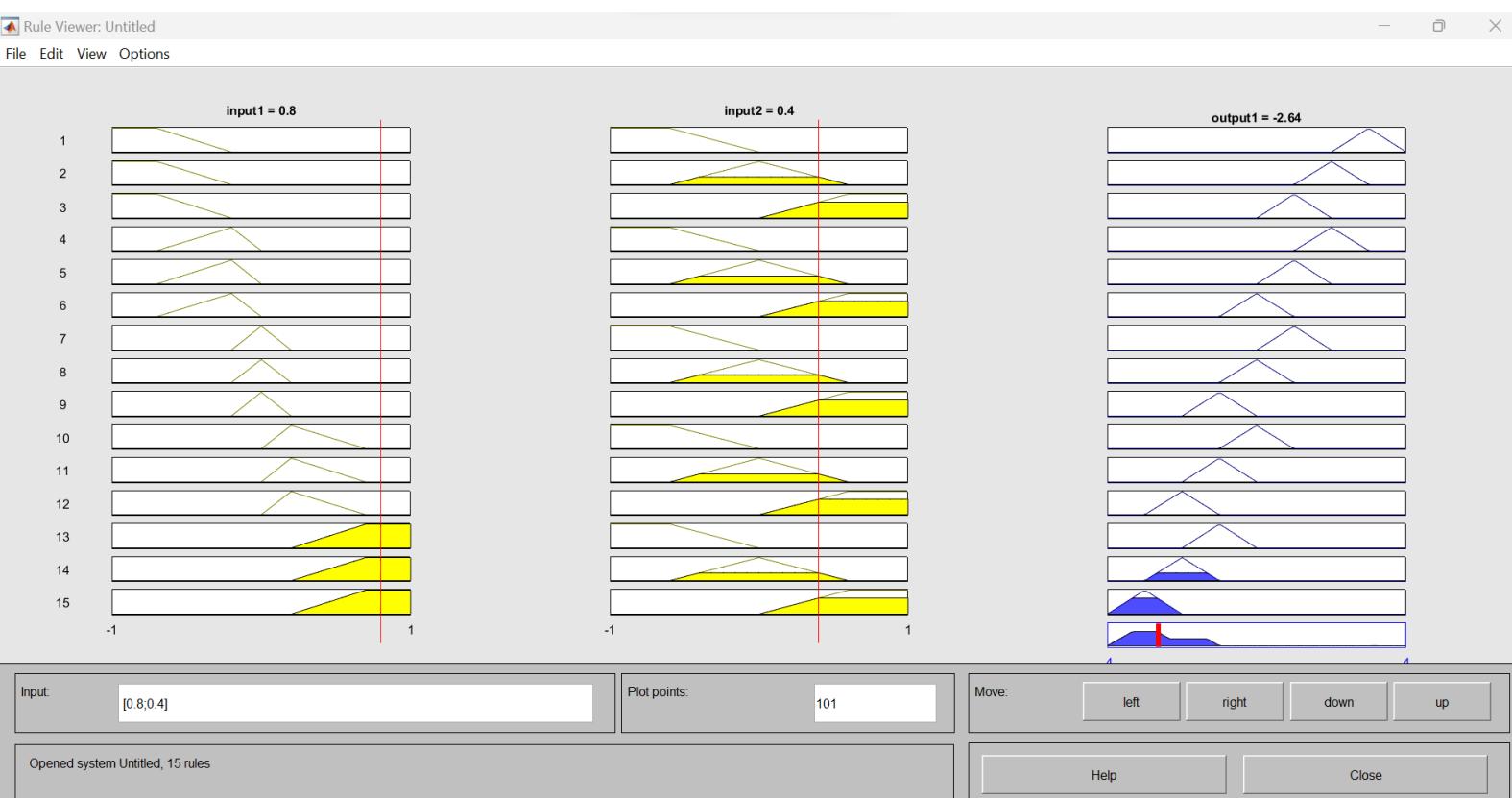
$$x_1' = 0,8 \Rightarrow \begin{bmatrix} M_{NB}(x_1') \\ M_{NS}(x_1') \\ M_{ZE}(x_1') \\ M_{PS}(x_1') \\ M_{PB}(x_1') \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 1 \end{bmatrix}$$

$$x_2' = 0,4 \Rightarrow \begin{bmatrix} M_{NE}(x_2') \\ M_{ZE}(x_2') \\ M_{PO}(x_2') \end{bmatrix} = \begin{bmatrix} 0 \\ 1/3 \\ 2/3 \end{bmatrix}$$

$x_1$	$x_2$	$y$	$d_1$	$d_2$	$\beta = \min(d_1, d_2)$
PB	ZE	NM	1	$1/3$	$1/3$
PB	PO	NB	1	$2/3$	$2/3$



## Kiểm tra lại kết quả suy luận dùng Matlab



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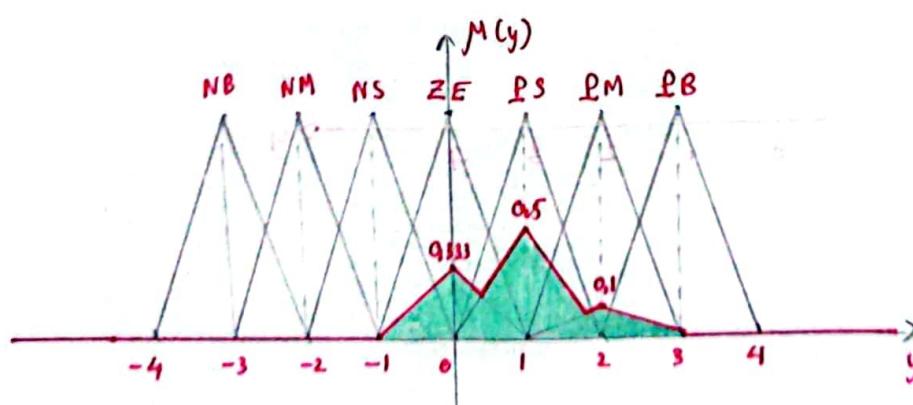
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Bài 2.2.a: Sử dụng phương pháp suy luận MAX-PROD,  $x_1' = -0,5$ ,  $x_2 = 0,5$

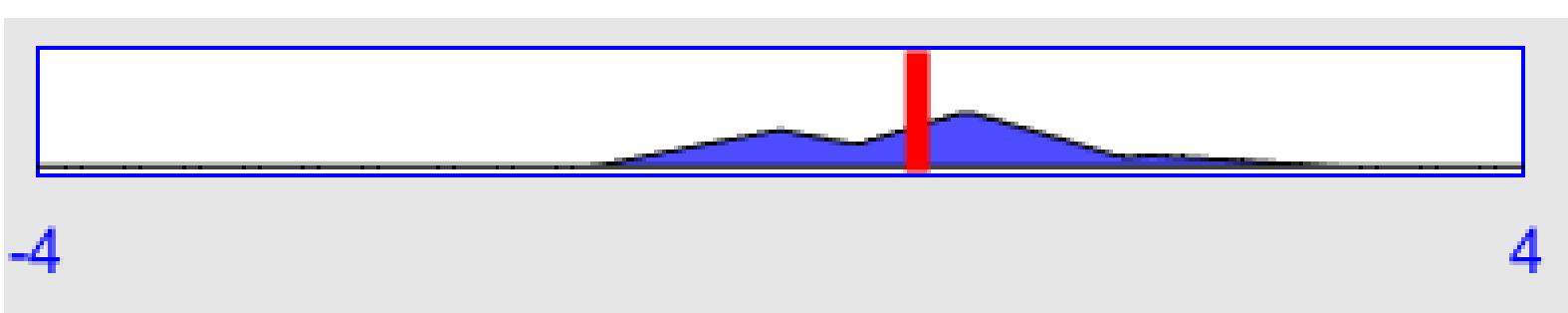
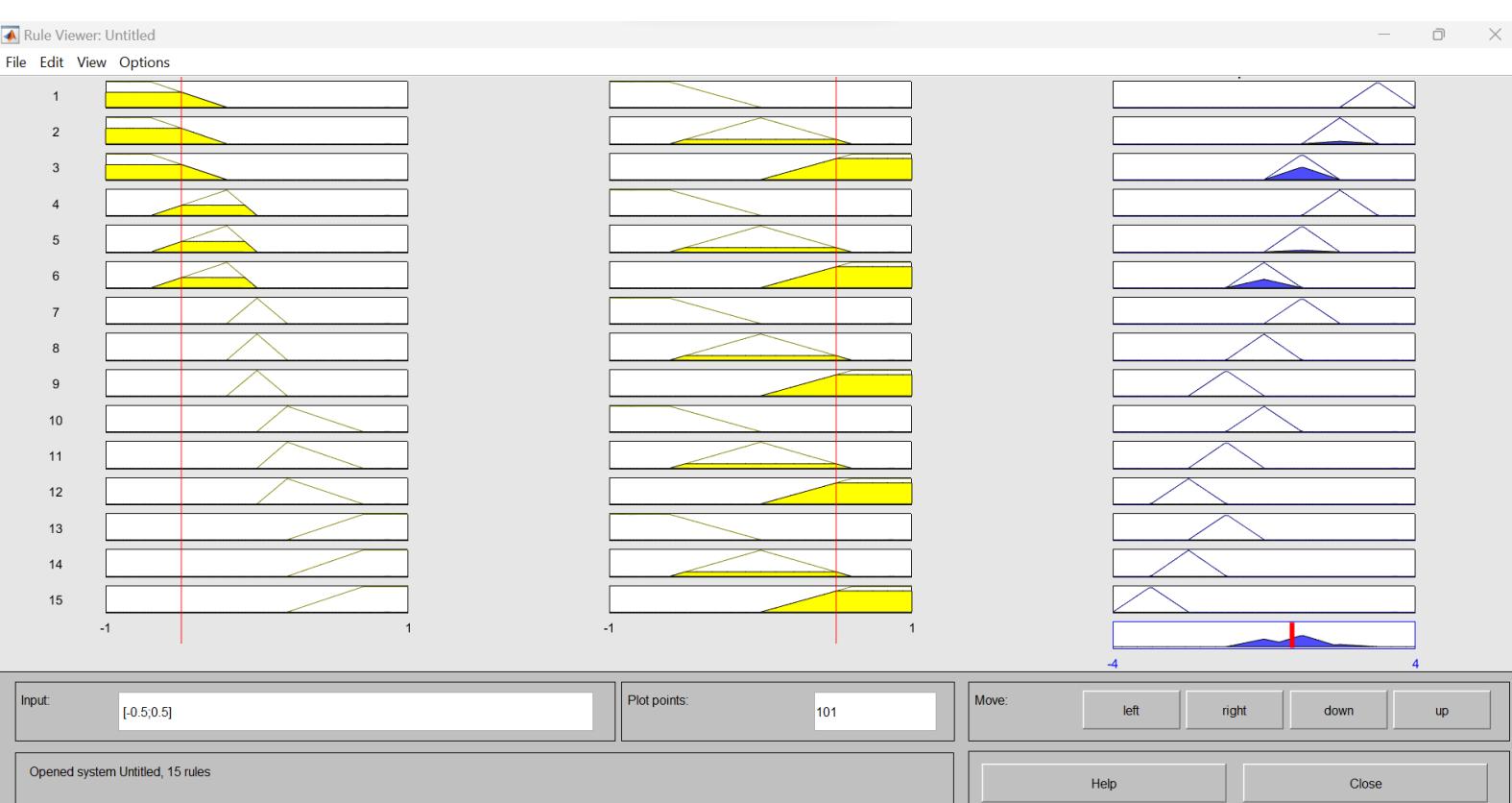
$$x_1' = -0,5 \Rightarrow \begin{bmatrix} M_{NB}(x_1') \\ M_{NS}(x_1') \\ M_{ZE}(x_1') \\ M_{PS}(x_1') \\ M_{PB}(x_1') \end{bmatrix} = \begin{bmatrix} 0,6 \\ 0,4 \\ 0 \\ 0 \\ 0 \end{bmatrix}$$

$$x_2' = 0,5 \Rightarrow \begin{bmatrix} M_{NE}(x_2') \\ M_{ZE}(x_2') \\ M_{PO}(x_2') \end{bmatrix} = \begin{bmatrix} 0 \\ 1/6 \\ 5/6 \end{bmatrix}$$

$x_1$	$x_2$	$y$	$d_1$	$d_2$	$\beta = \text{LROP}(d_1, d_2)$
NB	ZE	PM	0,6	1/6	0,1
NB	PO	PS	0,6	5/6	0,5
NS	ZE	PS	0,4	1/6	0,067
NS	PO	ZE	0,4	5/6	0,333



## Kiểm tra lại kết quả suy luận dùng Matlab

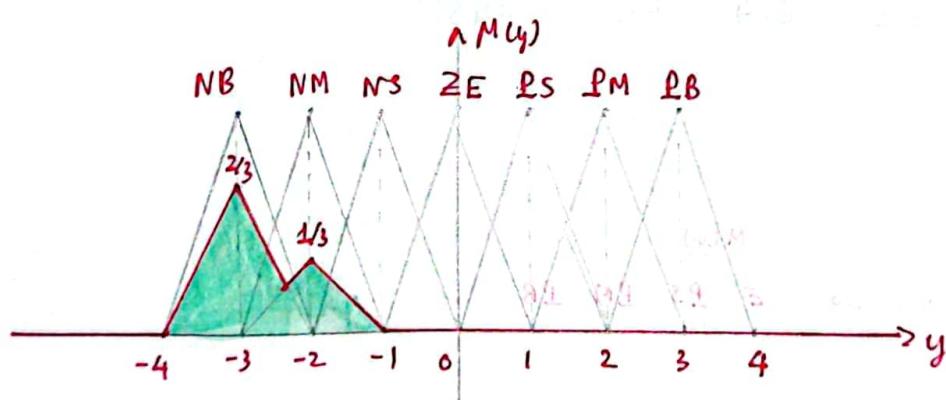


2.2. b. Sử dụng phương pháp suy Luận Max-PROD,  $x_1 = 0,8$ ,  $x_2 = 0,4$

$$x_1' = 0,8 \Rightarrow \begin{bmatrix} M_{NB}(x_1') \\ M_{NM}(x_1') \\ M_{ZE}(x_1') \\ M_{PS}(x_1') \\ M_{PB}(x_1') \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 1 \end{bmatrix}$$

$$x_2' = 0,4 \Rightarrow \begin{bmatrix} M_{NE}(x_2') \\ M_{ZE}(x_2') \\ M_{PO}(x_2') \end{bmatrix} = \begin{bmatrix} 0 \\ 1/3 \\ 2/3 \end{bmatrix}$$

$x_1$	$x_2$	$y$	$d_1$	$d_2$	$\beta = PROD(d_1, d_2)$
PB	ZE	NM	1	1/3	1/3
PB	PO	NB	1	2/3	2/3



## Kiểm tra lại kết quả suy luận dùng Matlab



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