PRACTICA 3

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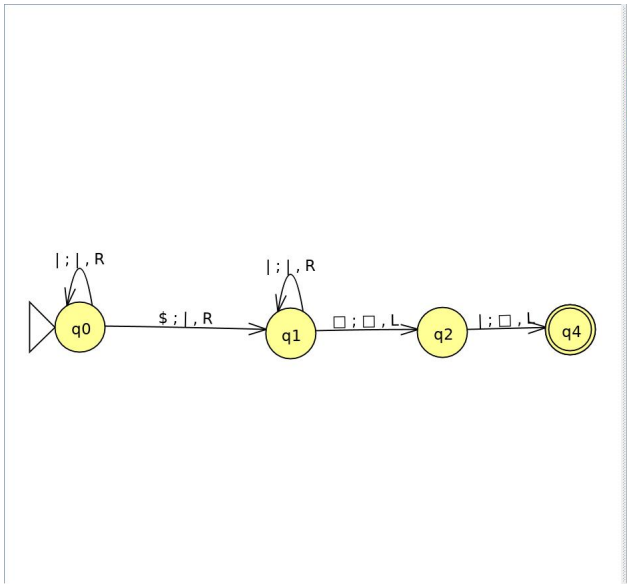
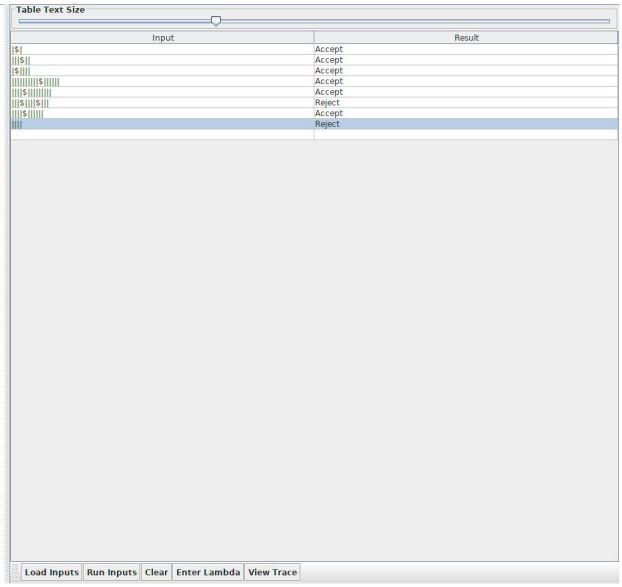
1.





2.
$<< \pi_1^1|\sigma(\pi_3^3) > |\sigma(\pi_4^4) >$

```
>> evalrecfunction('<<π^1_1|σ(π^3_3)>|σ(π^4_4)>',3,4,2)
<<π¹₁|σ(π³₃)>|σ(π⁴₄)>(3,4,2)
<<π¹₁|σ(π³₃)>|σ(π⁴₄)>(3,4,1)
<<π¹₁|σ(π³₃)>|σ(π⁴₄)>(3,4,0)
<π¹₁|σ(π³₃)>(3,4)
<π¹₁|σ(π³₃)>(3,3)
<π¹₁|σ(π³₃)>(3,2)
<π¹₁|σ(π³₃)>(3,1)
<π¹₁|σ(π³₃)>(3,0)
π¹₁(3) = 3
σ(π³₃)(3,0,3)
π³₃(3,0,3) = 3

σ(3) = 4
σ(π³₃)(3,1,4)
π³₃(3,1,4) = 4

σ(4) = 5
σ(π³₃)(3,2,5)
π³₃(3,2,5) = 5

σ(5) = 6
σ(π³₃)(3,3,6)
π³₃(3,3,6) = 6

σ(6) = 7
σ(π⁴₄)(3,4,0,7)
π⁴₄(3,4,0,7) = 7

σ(7) = 8
σ(π⁴₄)(3,4,1,8)
π⁴₄(3,4,1,8) = 8

σ(8) = 9
ans =  9
```

3.

Q = (3, s)

s:

X_4:= X_1;
while $X_2 \neq 0$ **do**
$X_4 := X_4 + 1$;
$X_2 := X_2 - 1$;
od
while $X_3 \neq 0$ **do**
$X_4 := X_4 + 1$;
$X_3 := X_3 - 1$
od
X_1:= X_4;