# Homework

Monday, August 26, 2019 9:51 AM

HW1

1. a)False b)True c)True
2. {a,c}
3. {(a,c),(a,f),(b,d)}

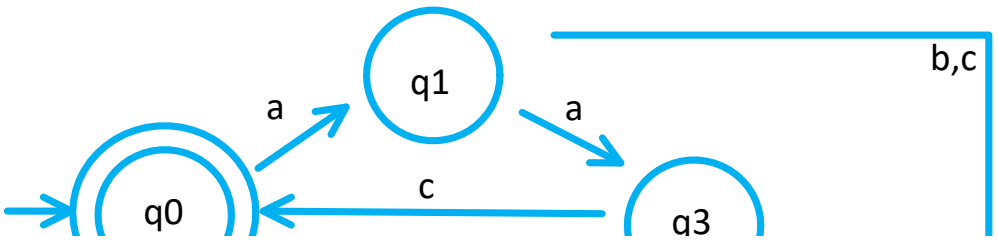
HW2

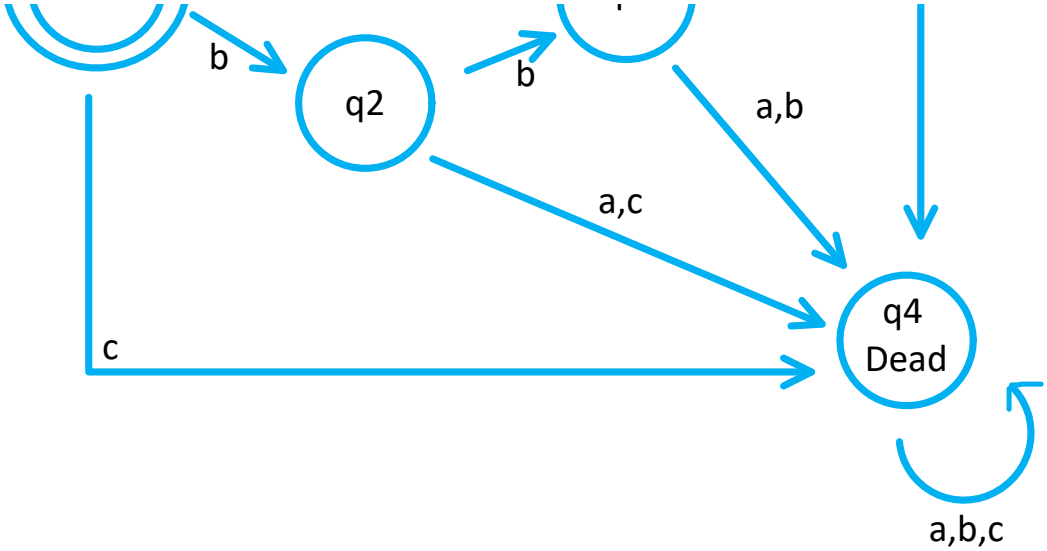
1.

| Strings | Expression |
|---|---|
| aaa | c*ac*ac*ac* |
| aab | c*ac*ac*bc* |
| aba | c*ac*bc*ac* |
| abb | c*ac*bc*bc* |
| baa | c*bc*ac*ac* |
| bab | c*bc*ac*bc* |
| bba | c*bc*bc*ac* |
| bbb | c*bc*bc*bc* |

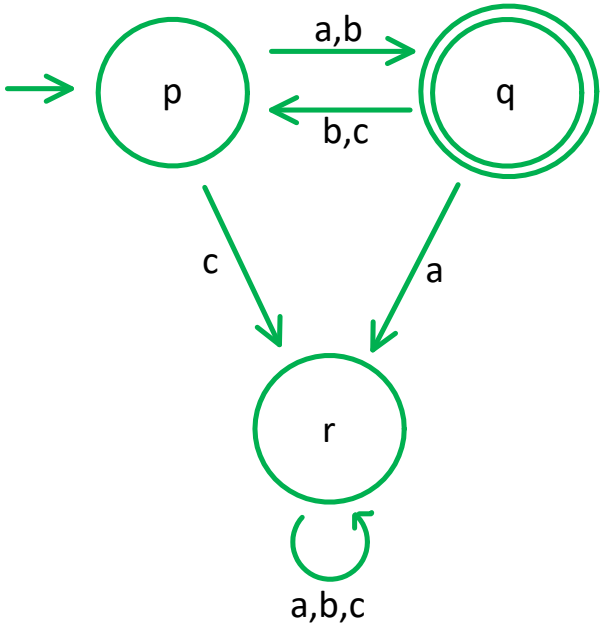
Simplified Answer:
c*(a ∪ b)c*(a ∪ b)c*(a ∪ b)c*

HW3






HW4



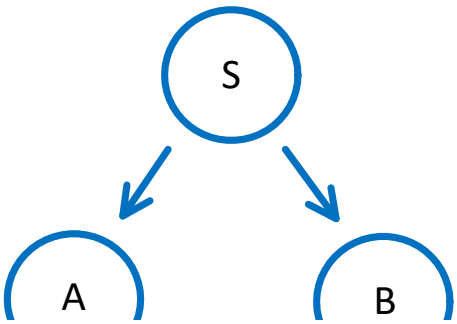

Regular Expression: ((a+b)(b+c))*(a+b)

HW5

- G={V, Σ, R, S}

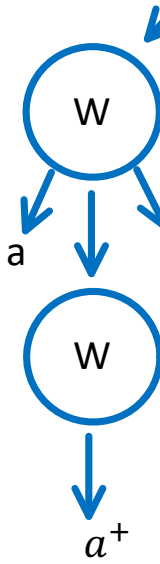
- V = {S,A,B,W,X,Y,Z}
- Σ = {a,b,c,d}
- R =

| | |
|---|---|
| S -> | AB |


S
A
B

| | |
|---|---|
| S-> | AB |

| | |
|---|---|
| A-> | W\|X |
| W-> | aWb \| $a^+$ |
| X-> | aXb \| $b^+$ |

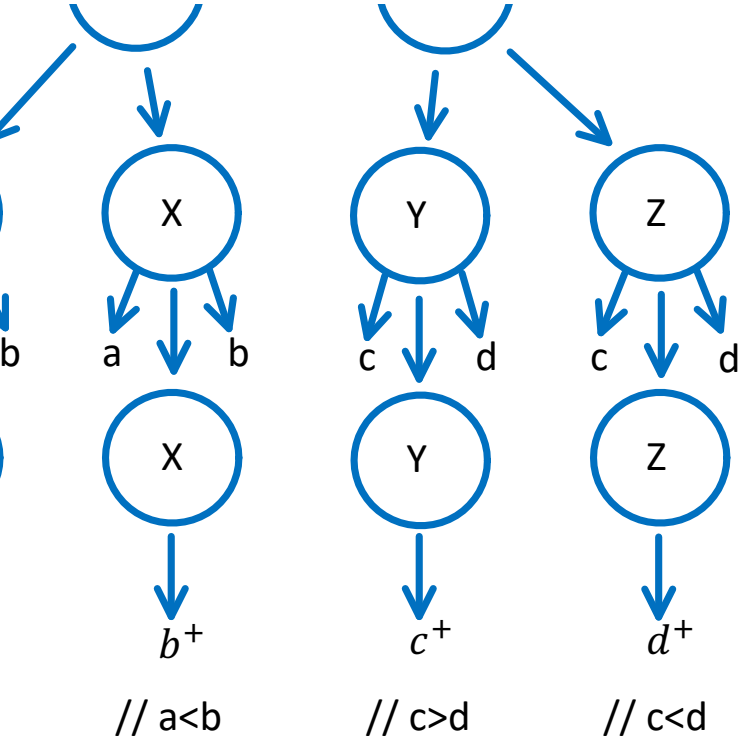



| | |
|---|---|
| B-> | Y\|Z |
| Y-> | cYd \| $c^+$ |
| Z-> | cZd \| $d^+$ |

- S = S

- G = { {S,A,B,W,X,Y,Z} , {a,b,c,d} , // a>b
  { S -> AB,
  A -> W|X , W -> aWb | $a^+$ , X -> aXb | $b^+$ ,
  B -> Y|Z , Y -> cYd | $c^+$ , $Z$ -> cZd | $d^+$ }
  , S }

// formatted this way for easier readability, its all one set on one line without




formatting