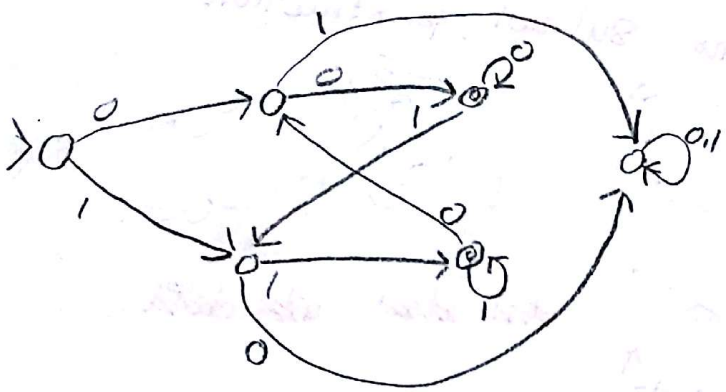
~~CS~~331 - Cahlen Brancheau
HW 6

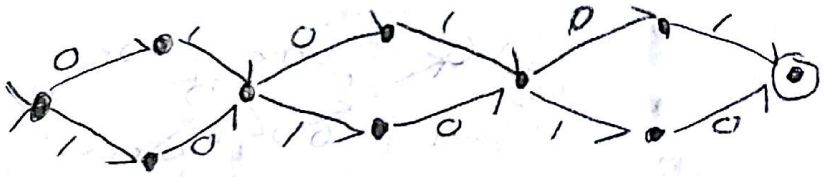
78/100

41)

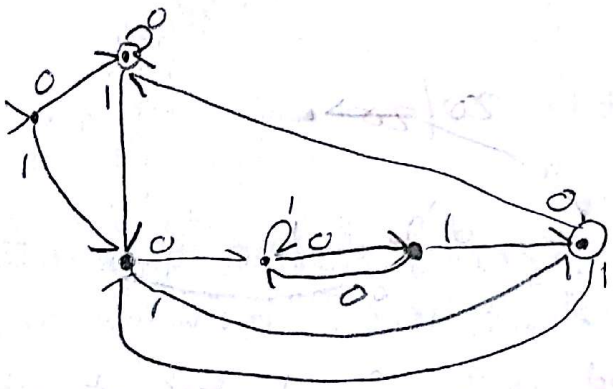
a) $(000^* + 111^*)^*$



b) $(01+10)(01+10)(01+10)$

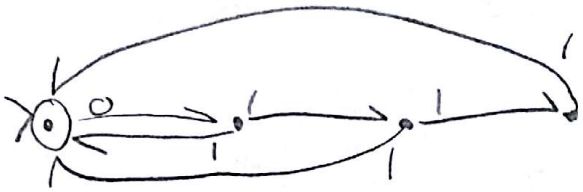


c) $(0+1(01^*0)^*1)^*$



42)

$(01 + 011 + 0111)^*$ 15/20




✓ 15/15

no subset construction
-5

43) 20/20

~~$(ab^*a + ba^*b)^*(ab^* + ba^*)$~~ ~~wrong~~ ~~almost~~ ~~almost correct~~

correct ↑

44)

$x \in L(\alpha \wedge \beta)$ iff $x \in L(\alpha) \wedge x \in L(\beta)$

$b^*(ab^*ab^*)^* \wedge a^*b(a^*ba^*b)^*a^*$

45)

17/20 a) $b^*$ ✓ 10/10

b) $a + bb^*a^*$ needs to include $\varepsilon$ -3 7/10

$b^*a^*$

47)

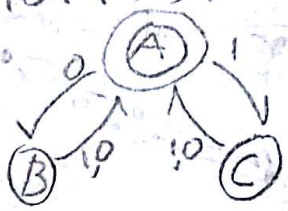
$((a+b)(a+b(a+b)))^*(a+b)b$ 20/20

46)

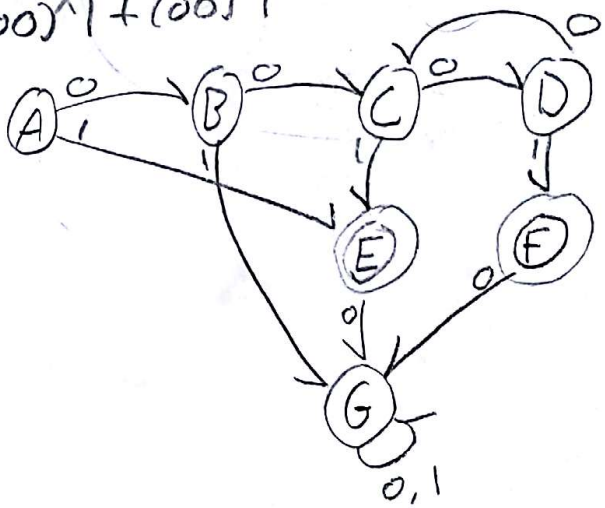
Finite Automata cannot count so the subset
10/20 can't be regular. I don't know How to show
that formally. - need to be formal, look at notes

48)

a) $(00+11)^*(01+10)(00+11)^*$




b) $(000)^*1+(00)^*1$




c)