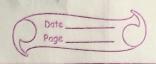
	Homework #5 Homework #5 Homework #5	cabhat Rija
	Problem 4.13	
	Given: A = \(\((R, s) \) R and S are a regular exprision and \(\((R) \) \(\	ossi ms
	Here, L(R) C L(S) 2-> L(R) A L(S) = 9	5
	brook; was and	
V Dispay	TMq="On input < Ress) where Rd are regular expressions:	\$
	1. Convert regular expressions R and 5 to DFAs A and B reaspectively.	
111	2. Create DFA ac for L(1) s.f. it accepts L(B)	
	3. Construct DFA PPFOR L(D) s.t L(D)=L(NATIO
. 100	Y'Run T.M. that decides topp on <d> If it occepts, accept. If it rejects, reject.</d>	

11 11 11



Pra	blem	4.1	k
7+0	W 15		

BARRETT TOURS

Given: a language containing at least one string with that has III as a substring 3

To prove: A is decidable.

Assuming 5 is the alpabet for R

TM2 = "On input <R) where R is a regular expression

1. Convert Rinto a DFA DA

2. Construct DFA B s.t it accepts language L(B)= &w s.t. a has the substring 1113

3: construct a DFA C st. It a describbles

U; Run t.m. mot decides EppA on LCA>. If it accepts, reject. If it rejects, accept.