Ex. 2.3.1

Convert DPA to NFA

	0	1
-> P	£P,93	EP3
9	ters	8-3
Ĺ	€53	1
* 2	ી ફક્યુ	1853

	O	
→ P	2 P, 93	283
=> {p,93	£9,9,53	20,53
£ 8,9,53	LP,9, r,53	E bill A
1 & P.A. 1.53	£ 0,9,0,53	8 8, 5,33
,	fp,9,0,59	E5,7,93
* {P,r,s}	& P, 9, 53	80,53
A T P. 8 9	£ P,9,53	28,53
, 20,09	£ P, 9,53	£ 63

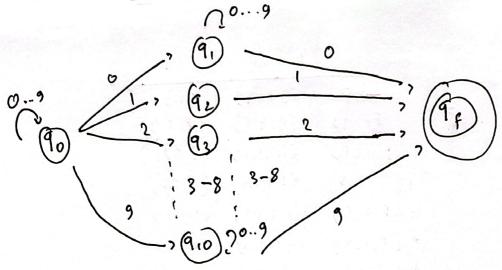
Ex. 2.3.2

convert PFA to NFH

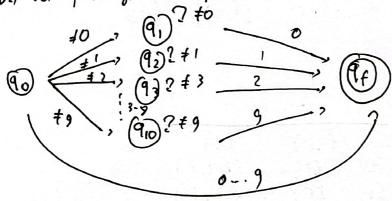
0	t		0	1
Iq,54	293	-> 1>	£9,5}	£93
2 ry		+ 69.53	Ery	60,9,03
653		+ 493	Tr3	69163
6	,	* {PA, F}	{9,1,53	{ b.4. L}
	()	ودع	£ 53	(13
		* {9,53	50,53	£ 6.4, ch
		G- 12.	dr,53	5 6.4.6
			0	603
			1 5 24	563
		4 (1)	737	1
		φ	1 9	19
		- > 5	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(P3)
	19,53 £ r3 {53	19.53 293 203 29.03 253 203	19,59 293 -> P 2003 49,09 + 19,59 153 203 + 193 100 100 100 100 100 100 100 100 100 100	[4,5] (4) -> 12 (4,5) (5) (4,7) + (4,5) (5) (4) + (4) (5) (7) (6) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7)

Ex. 2.3.4

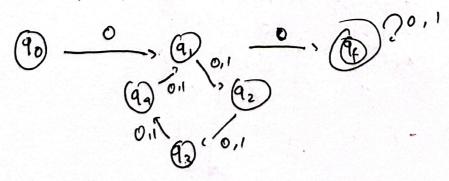
a.) Set of strings over alphabet 20,1,..., gy such that the final digit has appeared.



b.) Set of strings over alphabet &0,1,...,93 that the final digit has not appeared before.



C) Set of Strongss of o's and 1's such that there are two o's separated by a number of positions that 13 multiple of 9. O is allowable multiple of 9.



Ex . 2.4.1 NFA for: a.) abc, abd, and aacd. Assume the alphabet is {a,b,c,d} 6.) 0101,101,011 c) ab, be, ca a, 6, -, 60 , 6, -, 60 , 6, -, 60 , 6, -, 60