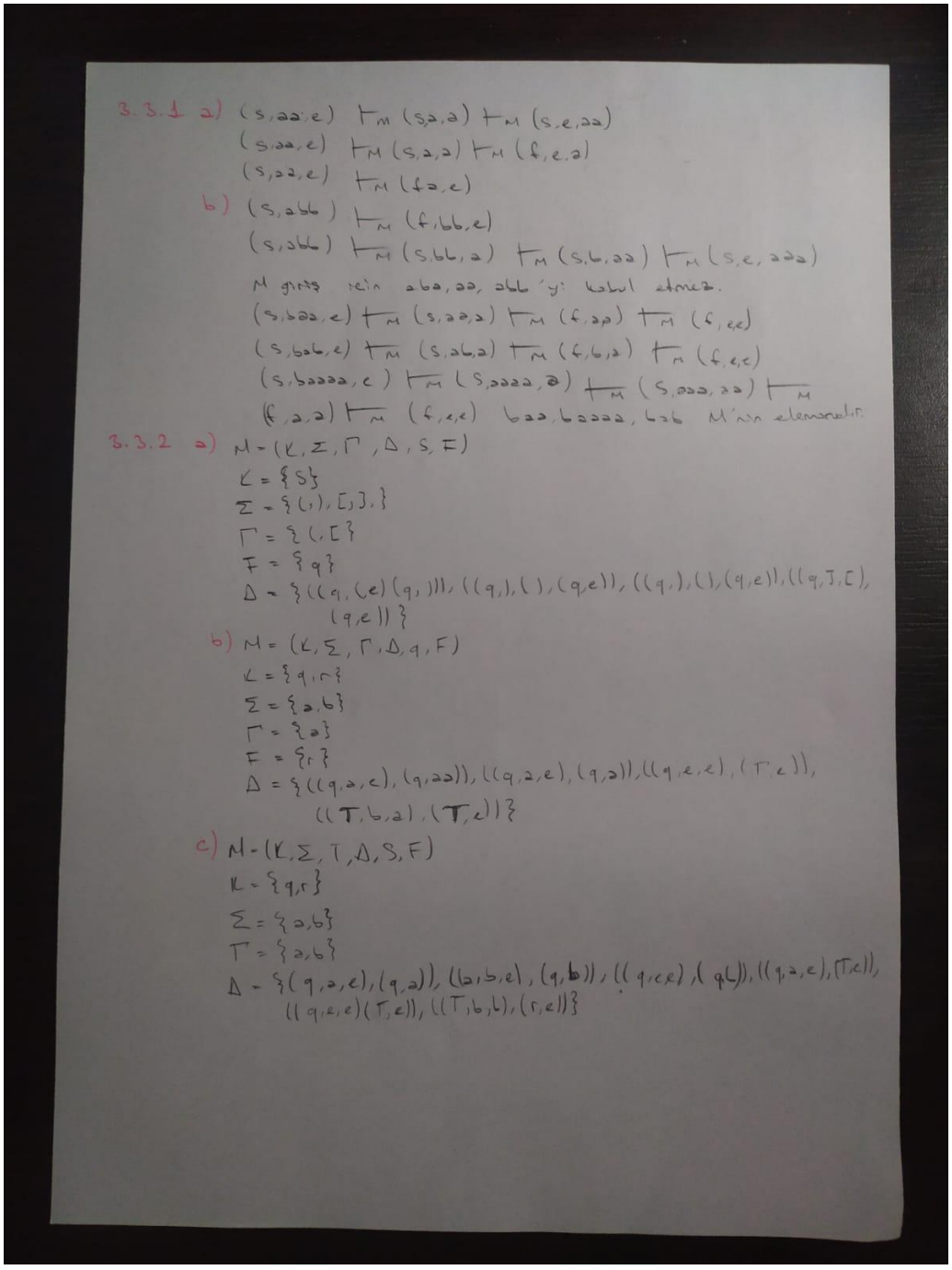
Biçimsel Diller ve Otomata Teorisi

Ödev-8



3.3.1 a) $(s,aa,e) \vdash_M (s,a,a) \vdash_M (s,e,aa)$

$(s,aa,e) \vdash_M (s,a,a) \vdash_M (f,e,a)$

$(s,aa,e) \vdash_M (f,a,e)$

b) $(s,abb) \vdash_M (f,bb,e)$

$(s,abb) \vdash_M (s,bb,a) \vdash_M (s,b,aa) \vdash_M (s,e,aaa)$

M girdi için aba, aa, abb'yi kabul etmez.

$(s,baa,e) \vdash_M (s,aa,a) \vdash_M (f,aa) \vdash_M (f,e,e)$

$(s,bab,e) \vdash_M (s,ab,a) \vdash_M (f,b,a) \vdash_M (f,e,e)$

$(s,baaaa,e) \vdash_M (s,aaaa,a) \vdash_M (s,aaa,aa) \vdash_M$

$(f,a,a) \vdash_M (f,e,e)$ baa, baaaa, bab M'nin elemanıdır.

3.3.2 a) $M = (K, \Sigma, \Gamma, \Delta, S, F)$

$K = \{S\}$

$\Sigma = \{(,), [,]\}$

$\Gamma = \{(, [\}$

$F = \{q\}$

$\Delta = \{((q,(,e),(q,()),((q,(,(),(q,e)),((q,(,(),(q,e)),((q,],[),$
$(q,e))\}$

b) $M = (K, \Sigma, \Gamma, \Delta, q, F)$

$K = \{q,r\}$

$\Sigma = \{a,b\}$

$\Gamma = \{a\}$

$F = \{r\}$

$\Delta = \{((q,a,e),(q,aa)),((q,a,e),(q,a)),((q,e,e),(T,e)),$
$((T,b,a),(T,e))\}$

c) $M = (K, \Sigma, T, \Delta, S, F)$

$K = \{q,r\}$

$\Sigma = \{a,b\}$

$T = \{a,b\}$

$\Delta = \{(q,a,e),(q,a)),((b,b,e),(q,b)),((q,c,e),(q,c)),((q,a,e),(T,e)),$
$((q,e,e)(T,e)),((T,b,b),(r,e))\}$

d) $M = (K, \Sigma, \Gamma, \Delta, s, F)$

$K = \{q\}$

$\Sigma = \{a, b\}$

$\Gamma = \{A, a, b\}$

$F = \{q\}$

$\Delta = \{((q,a,e),(q,Aa)), ((q,b,e),(q,bb)), (q,a,b),(q,a)), (q,a,\Delta),(q,a)),$
$(q,b,a),(q,e))\}$

3.4.1 Yeni makine $\Delta = \{((p,e,e),(q,s)), ((q,e,s),(q,ss)), ((q,e,s),(q,(s))),$
$((q,e,s),(q,e)), ((q,),()(q,e)), ((q,))),(q,e))\}$ olmak üzere
$M = (\{p,q\}, \{(,)\}, \{(,),s\}, \Delta, p, \{q\})$ olur.

$(p,(()()),e) \vdash_M (q,()()(),s)$

$\vdash_M (q,(()()),(s))$

$\vdash_M (q,()()),s))$

$\vdash_M (q,()()),ss))$

$\vdash_M (q,()()),(s)s))$

$\vdash_M (q,)()),s)s))$

$\vdash_M (q,)()),)s))$

$\vdash_M (q,()),s))$

$\vdash_M (q,()),(s)))$

$\vdash_M (q,)),(s)))$

$\vdash_M (q,)),s)))$

$\vdash_M (q,)),)))$

$\vdash_M (q,),))$

$\vdash_M (q,e,e)$

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