

Homework #2 due October 25, Tuesday 2022, before recitation

(1) Try to simplify the following expressions and justify your simplification.

(i) $(0+1)^*.1.(0+1) + (0+1)^*.1.(0+1)$

(ii) $((0^*.1^*)+1)^*(0+1)^*$

(iii) $(L+M^*)^*$

(iv) $(L.M^*)^*$

(2) Convert the regular expression $((0.0^*.1)^+ 0.1)^*$ into an ϵ -NFA

(3) Problems from the textbook

3.1.1 (b) and (c)

3.1.4 (b) and (c)

3.2.1 (c) and (d)

3.2.3