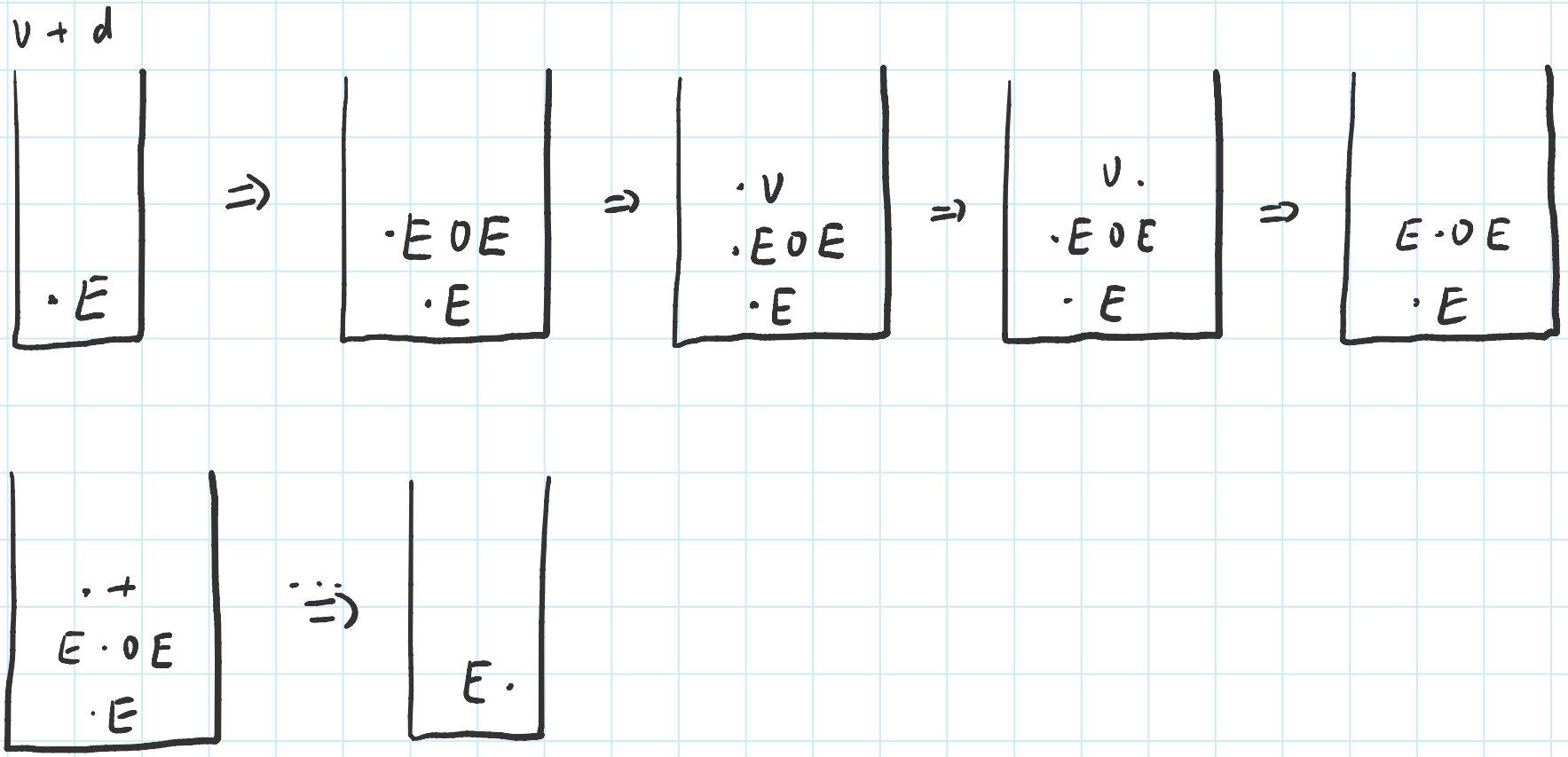
Week 11

Thursday, May 9, 2019 7:54 AM



$S \rightarrow 0S1 \mid A$

$A \rightarrow 1A0 \mid S \mid \varepsilon$

$A \rightarrow 1A0 \mid S \mid \varepsilon$

$P = (\{q\}, \{0,1\}, \{0,1,A,S\}, \delta, q, S)$

1. $\delta(q, \varepsilon, S) = \{(q, 0S1), (q, A)\}$
2. $\delta(q, \varepsilon, A) = \{(q, 1A0), (q, S), (q, \varepsilon)\}$
3. $\delta(q, 0, 0) = \delta(q, 1, 1) = \{(q, \varepsilon)\}$

$A \overset{*}{\Rightarrow} w = w_1 w_2 \cdots w_m$

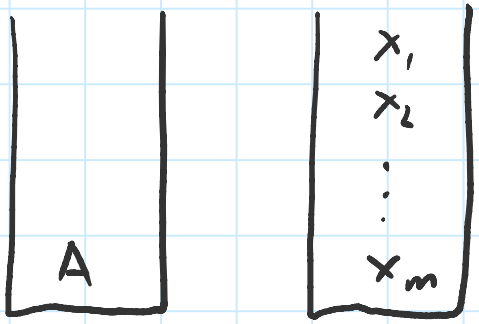
$A \rightarrow x_1 x_2 \cdots x_m$

$w_1 w_2 \cdots w_m$

$x_1 \overset{*}{\Rightarrow} w_1 \;,\; x_2 \overset{*}{\Rightarrow} w_2$

$(q, w_1, x_1) \overset{*}{\vdash} (q, \varepsilon, \varepsilon)$

$A \rightarrow x_1 x_2 \cdots x_m$



$(q, w, A) = (q, w_1 w_2 \cdots w_m, A) \vdash (q, w_1 \cdots w_m, x_1, \cdots, x_m)$

$\vdash^* (q, w_2 \cdots w_m, x_2 \cdots x_m) \vdash^* \cdots \vdash^* (q, \varepsilon, \varepsilon)$

$S \rightarrow [q_0 Z_0 P]$

$(q, x_1 \cdots x_k) \in \delta(P, a, x)$

$[p x P_k] \rightarrow a [q x_1 P_1] [P_1 x_2 P_2] \cdots [P_{k-1} x_k P_k]$