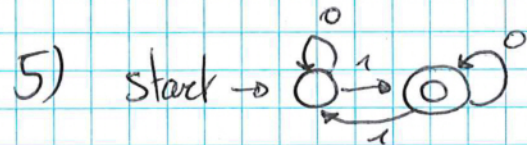
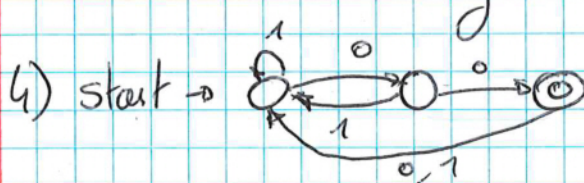
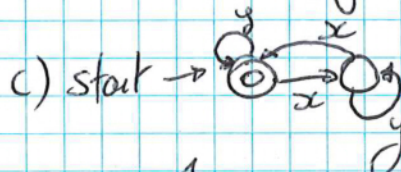
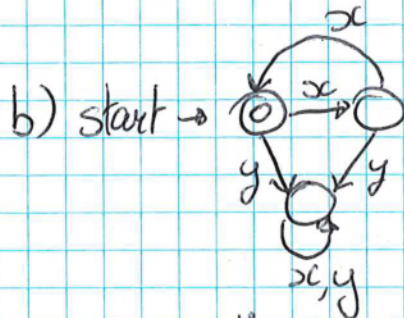
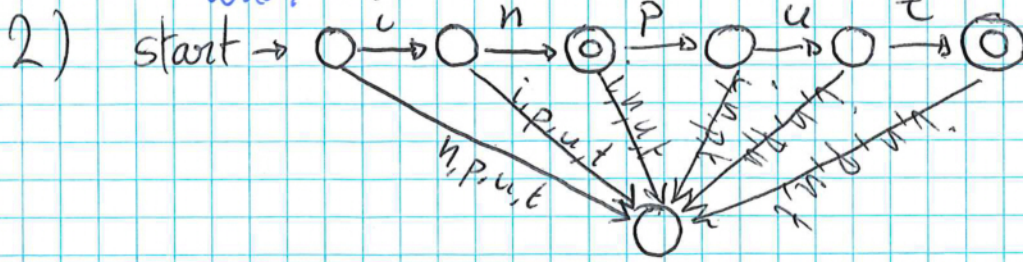
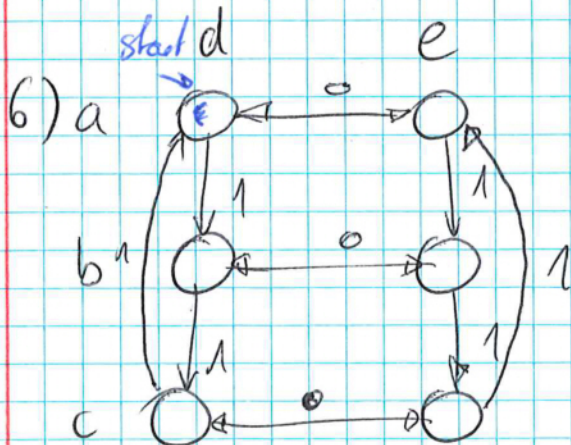


Talen & Automaten: oefeningenreeks 1

1) a) ~~Niet~~ Waar b) Niet Waar



Er moet een oneven aantal 1'en in de string voorkomen,



De string bestaat uit $2+3k$ 1'en, en een oneven aantal 0'en $\forall k \in \mathbb{N}$

7) $\hat{\delta}(q, xy) = \hat{\delta}(\hat{\delta}(q, x), y)$ ZOR

Basisgeval $y = \epsilon$

Bewijs: Triviaal

$\hat{\delta}(q, x) = \hat{\delta}(q, x)$

R $\hat{\delta}(\hat{\delta}(q, x), y) = \hat{\delta}(\hat{\delta}(q, x), y)$
 $\stackrel{PFF}{=} \hat{\delta}(q, xy)$

7.

$$\hat{\delta}(q, xy) = \hat{\delta}(\hat{\delta}(q, x), y)$$

Basisfall ~~q = \epsilon~~ $q = \epsilon$

~~IH als Beweis: Trivial?~~

$$L: \hat{\delta}(q, x) = \hat{\delta}(q, x)$$

$$R: \hat{\delta}(\hat{\delta}(q, x), y) = \hat{\delta}(\hat{\delta}(q, x), \epsilon) = \hat{\delta}(q, x) = L$$

$$\text{Induktion: } \hat{\delta}(q, xy) \stackrel{y=za}{=} \hat{\delta}(q, x(za))$$

$$\stackrel{\text{DEF}}{=} \hat{\delta}(\hat{\delta}(q, xz), a) \text{ zis horten dan y!}$$

$$\stackrel{\text{IH}}{=} \hat{\delta}(\hat{\delta}(\hat{\delta}(q, x), z), a)$$

$$\stackrel{\text{DEF}}{=} \hat{\delta}(\hat{\delta}(q, x), za)$$

$$= \hat{\delta}(\hat{\delta}(q, x), y)$$

□