1.1

push a
$a, a / aa$
$a, Z_0 / a Z_0$

$b, a / \varepsilon$

$\varepsilon, Z_0 / Z_0$
$\varepsilon, a / a$

$b, a / a$

q_0 q_1 q_3

$\varepsilon, Z_0 / Z_0$

q_2

ha letto una
b corrispondente
a una a, ora
attende un'altra
b e fa
pop di a

1.2

$b, a / \varepsilon$

$\varepsilon, Z_0 / Z_0$
$\varepsilon, a / a$

$\varepsilon, Z_0 / Z_0$

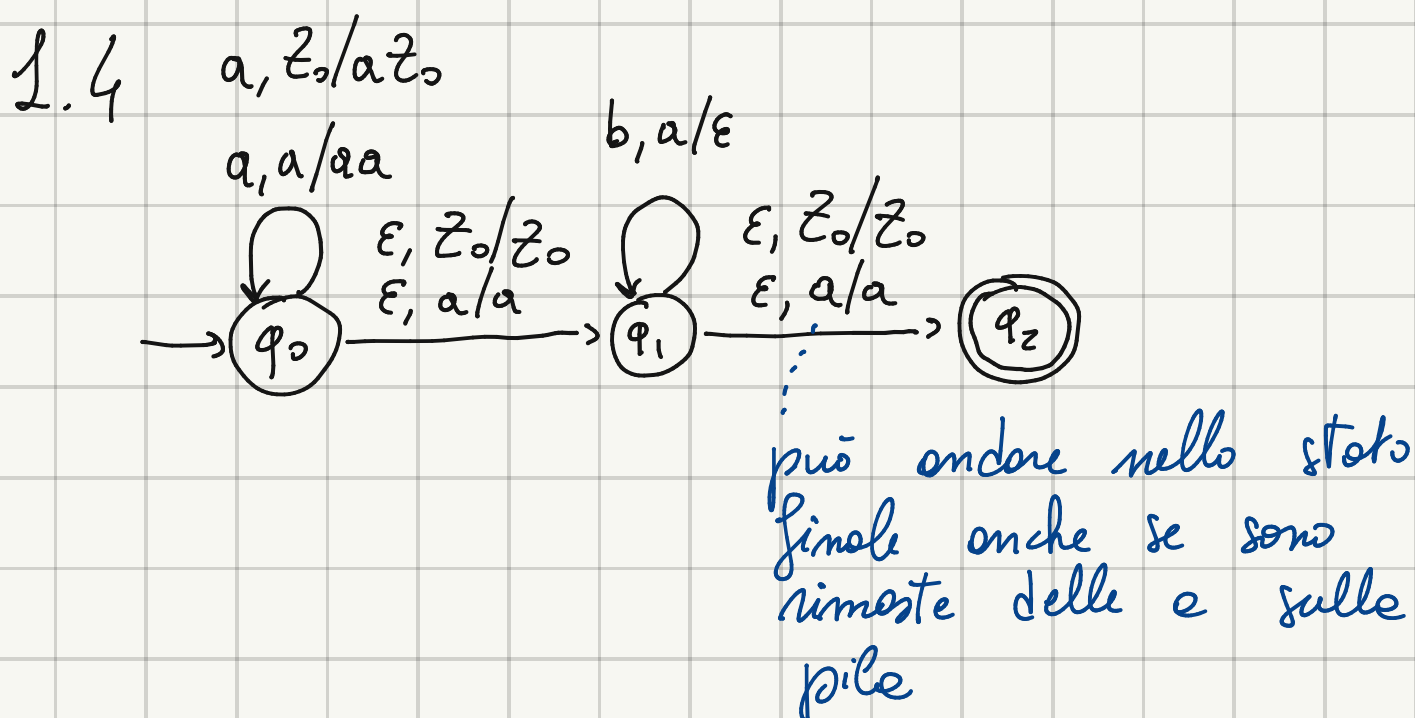q_0 q_2 q_3

$a, Z_0 / a Z_0$

$a, a / aa$

$a, a / a$

push a q_1
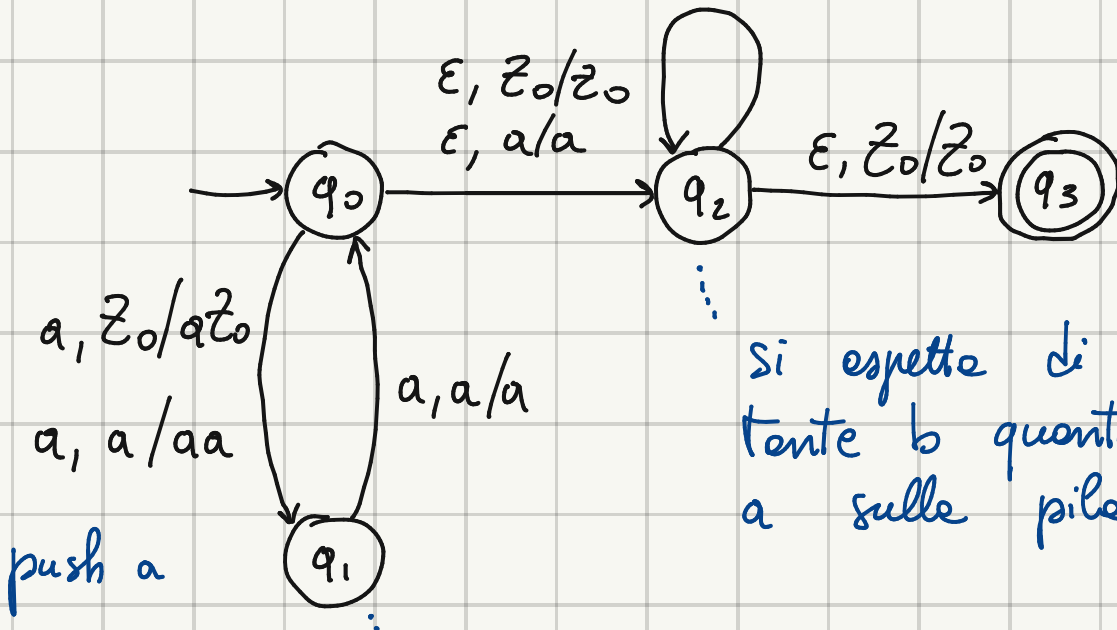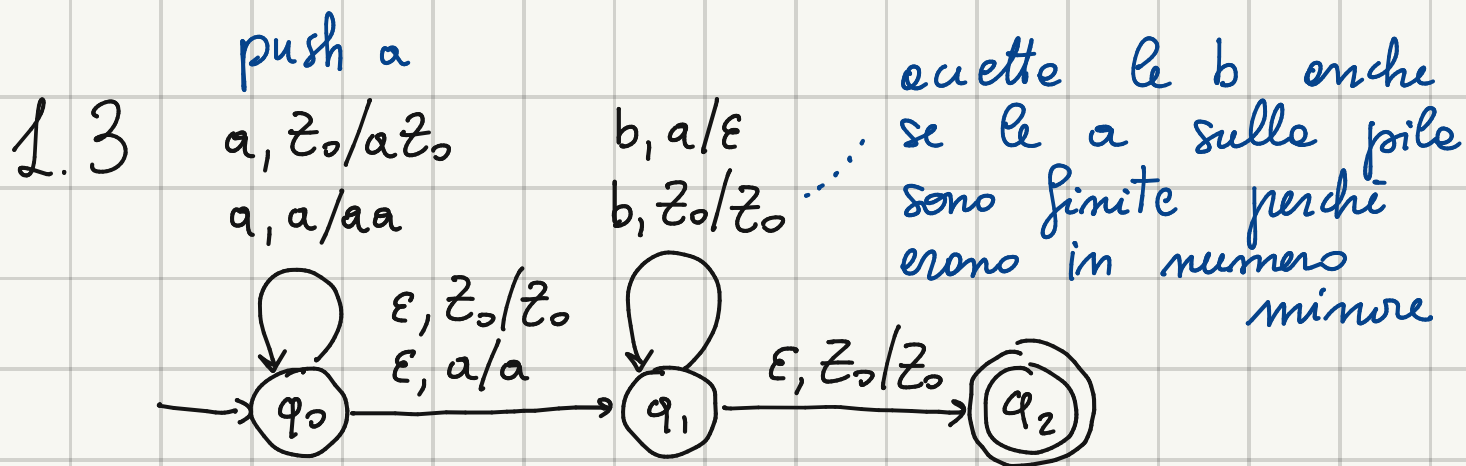
si aspetta di leggere
tante b quante sono le
a sulla pila

si aspetta di leggere una a, ma
non la memorizza sulla pila

1.3

push a

$a, Z_0/aZ_0$
$a, a/aa$

$b, a/\varepsilon$
$b, Z_0/Z_0$

accette le b anche se le a sulle pile sono finite perché erano in numero minore

$\varepsilon, Z_0/Z_0$
$\varepsilon, a/a$

$\varepsilon, Z_0/Z_0$

$\rightarrow (q_0) \xrightarrow{} (q_1) \xrightarrow{} ((q_2))$

1.4

$a, Z_0/aZ_0$
$a, a/aa$

$b, a/\varepsilon$

$\varepsilon, Z_0/Z_0$
$\varepsilon, a/a$

$\varepsilon, Z_0/Z_0$
$\varepsilon, a/a$

$\rightarrow (q_0) \xrightarrow{} (q_1) \xrightarrow{} ((q_2))$

può andare nello stato finale anche se sono rimaste delle a sulle pile

1.5

$1, 1/11$
$1, 0/10$
$1, Z_0/1Z_0$
$0, 1/01$
$0, 0/00$
$0, Z_0/0Z_0$

$1, 1/\varepsilon$
$0, 0/\varepsilon$

$\varepsilon, Z_0/Z_0$

$q_0 \qquad q_1 \qquad q_2$

$2, Z_0/Z_0$
$2, 0/0$
$2, 1/1$
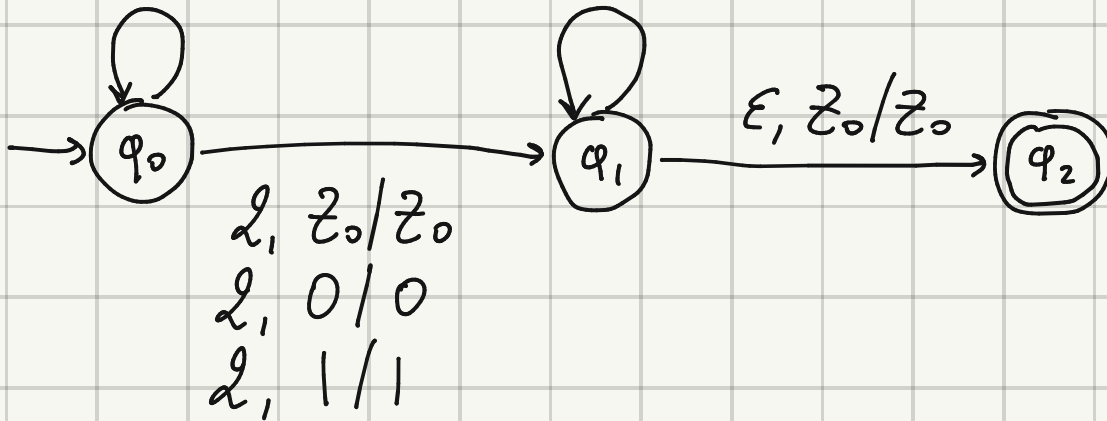
(2)

$$(q_0, 0110, Z_0) \vdash (q_1, 0110, Z_0) \vdash (q_2, 0110, Z_0)$$
$$\top$$
$$(q_0, 110, 0Z_0) \vdash (q_1, 110, 0Z_0)$$
$$\top$$
$$(q_0, 10, 10Z_0) \vdash (q_1, 10, 10Z_0)$$
$$\top$$
$$(q_1, 0, 0Z_0)$$
$$\top$$
$$(q_1, \varepsilon, Z_0) \vdash (q_2, \varepsilon, Z_0)$$

$$(q_0, 0, 110Z_0) \vdash (q_1, 0, 110Z_0)$$
$$\top$$
$$(q_0, \varepsilon, 0110Z_0) \vdash (q_1, \varepsilon, 0110Z_0)$$