

## P04: Exercises about $\epsilon$ -NFAs [SELECTED]

Solutions for the selected exercises: 1.a, 2

1. a)

	$\epsilon$	0	1
$\rightarrow q_s$	$\{q_3\}$	$\{q_1\}$	$\emptyset$
$q_1$	$\emptyset$	$\emptyset$	$\{q_2\}$
$* q_2$	$\emptyset$	$\{q_1\}$	$\emptyset$
$q_3$	$\emptyset$	$\{q_4\}$	$\emptyset$
$q_4$	$\emptyset$	$\emptyset$	$\{q_5\}$
$q_5$	$\emptyset$	$\{q_6\}$	$\emptyset$
$* q_6$	$\emptyset$	$\{q_4\}$	$\emptyset$

2. a)  $\text{EClose}(p) = \{p, q, r\}$

$\text{EClose}(q) = \{q\}$

$\text{EClose}(r) = \{r\}$

b) Only the strings bba e bbb are accepted.

c)

	a	b	c
$\rightarrow * \{p, q, r\}$	$\{p, q, r\}$	$\{q, r\}$	$\{p, q, r\}$
$* \{q, r\}$	$\{p, q, r\}$	$\{r\}$	$\{p, q, r\}$
$* \{r\}$	$\emptyset$	$\emptyset$	$\{p, q, r\}$
$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$