Memo No.

Bài tập 1

1. Máy turing M_1 thực hiện phép cộng nhị phân.

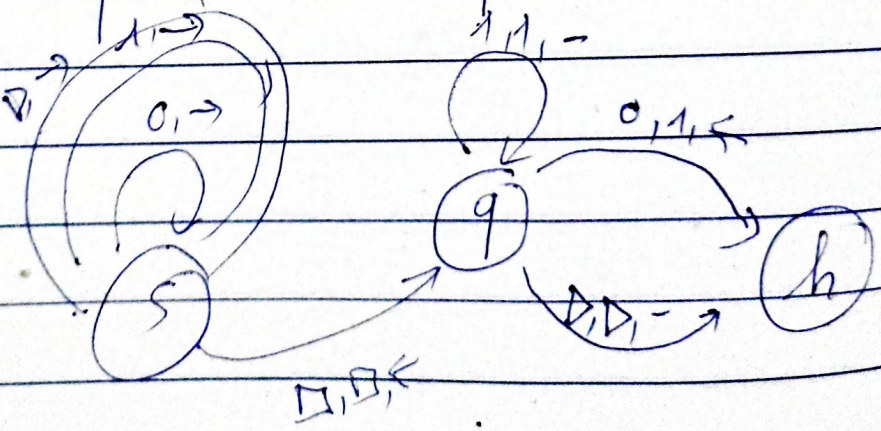
- Xây dựng

$K = \{s, q, h\}$

$\Sigma = \{0, 1, \triangleright, \square\}$.

$\delta(p, c)$

$p \in K$	$c \in \Sigma$	$\delta(p, c)$
s	0	$s, 0, \rightarrow$
s	1	$s, 1, \rightarrow$
s	$\triangleright$	$s, \triangleright, \rightarrow$
s	$\square$	$q, \square, \leftarrow$
q	0	$q, 1, \leftarrow$
q	1	$q, 1, \leftarrow$
q	$\triangleright$	$h, \triangleright, -$



2. Máy turing M_2 thực hiện phép 1 số nhị phân.

Memo No.

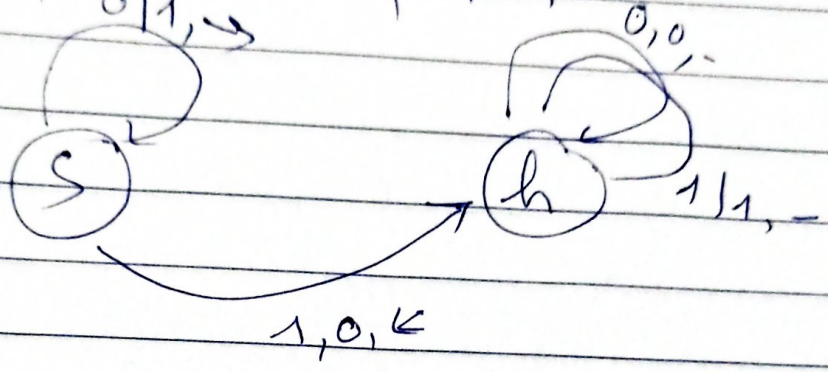
Date

$K = \{s, h\}$

$\Sigma = \{0, 1, \triangleright, \square\}$

$\delta(q, c)$

$q \in K$	$c \in \Sigma$	$\delta(q, c)$
s	0	s, 1, →
s	1	s, 0, →
s	$\triangleright$	s, $\triangleright$, →
s	$\square$	h, $\square$, -
h	0	h, 0, -
h	1	h, 1, -



3. Máy Turing M_3 thực hiện việc thay tất cả các số 0 trong dãy nhị phân thành các số 1 và ngược lại.

$\triangleright 01001\square \rightarrow 10110$

$K = \{s, h\}$

$\Sigma = \{0, 1, \triangleright, \square\}$

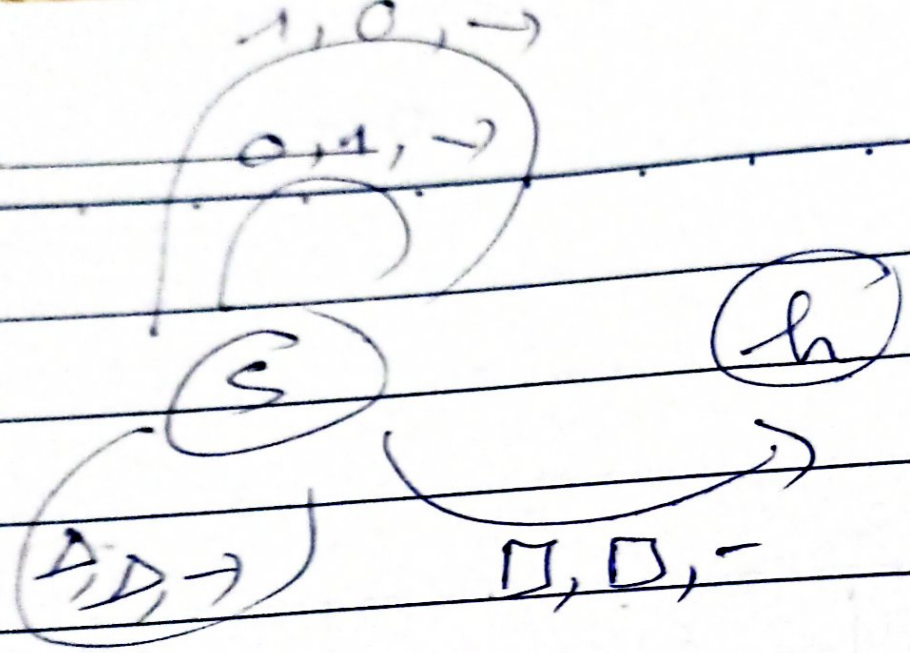
$\delta(q, c)$

$q \in K$	$c \in \Sigma$	$\delta(q, c)$
s	0	s, 1, →
s	1	s, 0, →
s	$\triangleright$	s, $\triangleright$, →
s	$\square$	h, $\square$, -

HẢI TIẾN

Memo No.

Date / /



Bài tập 2

1. Old world puzzle.

wolf: W
goat: Gt
Cabbge: C
person: P

b_1: W, C $\xrightarrow{PGt}$
b_2 W, C $\xleftarrow{P}$ Gt
b_3 W $\xrightarrow{PC}$ Gt
b_4 W $\xleftarrow{PGt}$ C
b_5 Gt $\xrightarrow{PW}$ C
b_6 Gt $\xleftarrow{P}$ CW
b_7 $\xrightarrow{PGt}$ CW
b_8 $\longrightarrow$ PGtCW

2. New world puzzle.

People1 (P_1: 1 minute
people2 P_2: 2 minute
people3 P_3: 5 minute
people4 P_4: 10 minute.

$P_1 P_2 P_3 P_4$ $\xrightarrow{1'}$
b_1 $P_3 P_4$ $\xleftarrow{P_1 P_2}$ P_2 (2p)
b_2 $P_3 P_4$ $\xleftarrow{P_1}$ P_2 (1p)
b_3 P_1 $\xrightarrow{P_3 P_4}$ P_4 (10p)
b_4 P_1 $\xleftarrow{P_2}$ P_3, P_4 (2p)
b_5 $\xrightarrow{P_1 P_2}$ $P_1 P_2 P_3 P_4$ (2p)

Date

$\frac{1}{2}$ thõgran = 12p