

Functions of several parameters?

like $\text{sum}(37, 42) = 79$

Can: Put both #s on the tape with some "separator"
like #

37#42

Sometimes it's convenient to "stack" inputs:

$\frac{37}{42} \rightarrow \left[\begin{array}{c|c|c|c} \text{B} & \frac{3}{4} & \frac{7}{2} & \text{B} \end{array} \right]$

Binary arithmetic:

A TM for "bitwise AND"

00110 AND 10101

00110
AND 10101

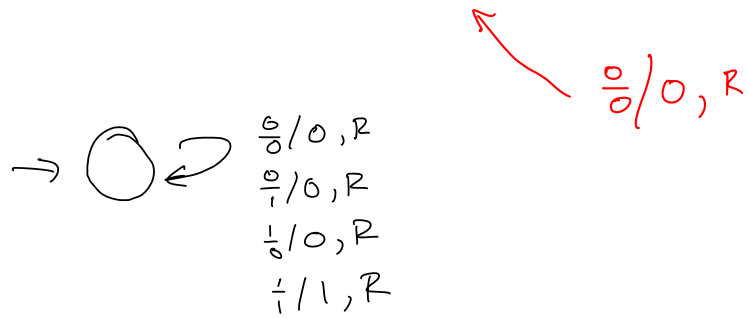
00100

on a TM: Tape starts with "letters"

like

0	0	1	1
↓	↓	↓	↓
0	0	0	1

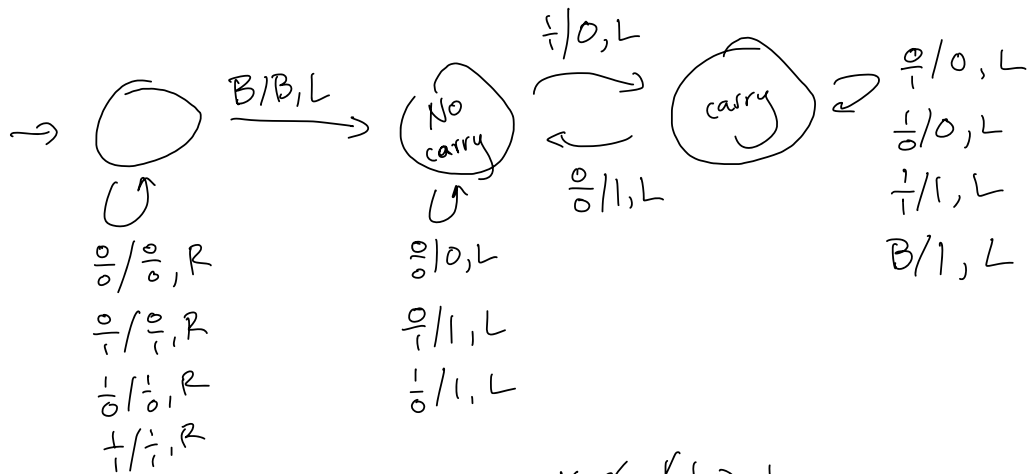
we'll replace them with:



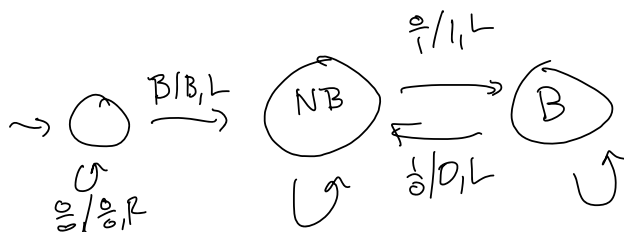
Bitwise add

$$\begin{array}{r}
 00110 \\
 + 10101 \\
 \hline
 11011
 \end{array}$$

$\frac{0}{1}/1, L$



$$\begin{array}{r}
 101 \\
 - 00111 \\
 \hline
 1110
 \end{array}$$



$$\frac{1}{0}/\frac{1}{2}, R$$

$$\frac{0}{1}/\frac{0}{1}, R$$

$$\frac{1}{1}/\frac{1}{1}, R$$

$$\frac{0}{0}/0, L$$

$$\frac{1}{1}/0, L$$

$$\frac{1}{0}/1, L$$

$$\frac{0}{0}/1, L$$

$$\frac{0}{1}/0, L$$

$$\frac{1}{1}/1, L$$