1)

제12주-화 Turing Machine

②_4.50' ③_5-60' — 1930's

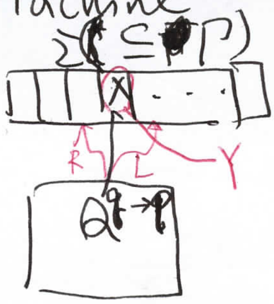
fa — pda — TM

rg. cfg

grammar, lang.

program

logic, proof



$\delta : Q \times \Gamma \to 2^{Q \times \Gamma \times \{L,R\}}$

$(p, Y, D) \in \delta(q, X)$

~~$(q, X) \xrightarrow{L/R} (p, Y)$~~

$(q, X) \xrightarrow{L/R} (p, Y)$

미적분 II - Multi variable vector

(미적분 I)

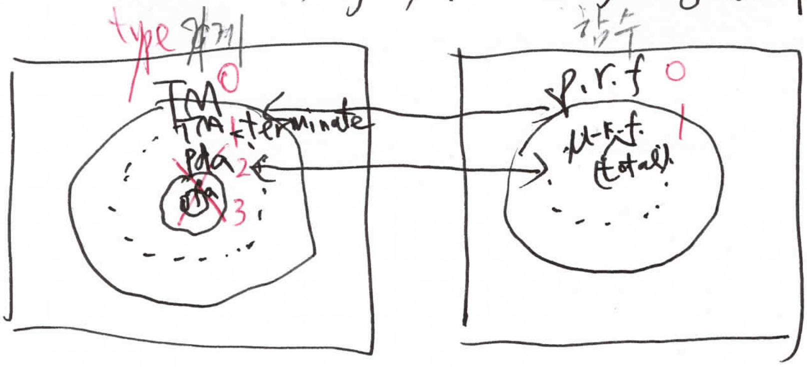
$F = ma = m \frac{d^2 s}{dt^2}$

$F = G \frac{Mm}{r^2}$

$= k \frac{Q \cdot q}{r^2}$

$E = mc^2$

⇒
⇒
⇒*



Conf. of TM

$\Gamma^* \times Q \times \Gamma^*$

↑ left content (tape) ↑ state ↑ right context (tape)

~~$\alpha X \beta$~~

α q.

$(\alpha, q, X\beta)$

(α, q, β)

(q, α, β)

$(q, n, \alpha\beta)$

$$L(M) = \{ w \in \Sigma^* \mid (\varepsilon, q_0, w) \overset{*}{\underset{M}{\Rightarrow}} (\alpha, f, \beta), \alpha, \beta \in \Gamma^*, f \in F \}$$

TM (program) <u>VS</u> function

L

terminating ~~TM~~ program ⟷ total ~~partial~~ ftn

μ-recursive

program ⟷ partial μ-rec. ftn

Lr

Turing-Church's Thesis

Computable

type 0 – recursively enumerable (R.E)

type 1 – recursive

non type 0 – non. R.E

non-programmable

" - computable

Ex) · Halting program.

· Cantor diagonal arg. (1)

Denial of self recursion