1)

# 4/6(수) Recursion.

Recursion (Induction)

Basis $P(n_0)$.

recus. $P(k) \Rightarrow P(++k)$ $\wedge$ $\forall k \geq n_0$.

--k

$k+C_1$, $k \leq C$

$P(n_0)$
$P(n_0+1)$ — C-basis
⋮
$P(n_0+C-1)$

Recursion은 ~~recursion~~ 귀납의 탈을 쓴 연역.
(induction) (Deduction)

Ex) $a_0 = b$

$a_n = a \cdot a_{n-1}$ $\left( \begin{matrix} n \geq 1 \\ n > 0 \end{matrix} \right)$ …. 점화식 (recurrence relation) ↳ chap. 8.
1차

$f_0, f_1 := 0, 1$;

$f_n = f_{n-1} + f_{n-2}$ $(n \geq 2)$ … 2차 점화식

k-차 점화식

일반항 (closed form) 구하기 $a_n = f(a_{n-1}, \ldots, n-k, f(0), f(1), \ldots f(k))$

~~$(a_n = a^n)$ — 가정~~ … 옳소! plug-and-chug
대입하고 - 고쳐쓰고

$a_0 = b$

$a_1 = a \cdot a_0 = a \cdot b = a \cdot b$

$a^2 = a \cdot a_1 = a \cdot ab = a^2 \cdot b$

$a^n = ba^n$.

(증명) $a^n = \underline{ba^n}$ 이다 $n \geq 0$

basis $a_0 = b \cdot a^0 = b$ Q.E.D. $a_0 = b$ (by def)

rec. $\underline{a_k = ba^k}$ 이다 가정

$a_{k+1} = a \cdot a_k = a \cdot ba^k = b \cdot a^{k+1}$
점화식정의 I.H. 모양새 맞추기.

~~$f_0, f_1 = 0, 1$;~~

function fibo($n \in \mathbb{N}$) $\in \mathbb{N}$.

$$\begin{cases} f_0 = 0,\ f_1 = 1 \\ f_n = f_{n-1} + f_{n-2} & n \ge 2 \end{cases}$$

if $n=0 \rightarrow$ return 0

▯ $n=1 \rightarrow$ return 1

▯ $n \ge 2 \rightarrow$ return fibo(n-1) + fibo(n-2); ~~return fibo~~

fi

E.W. Dijkstra

Code for machine vs human-being!

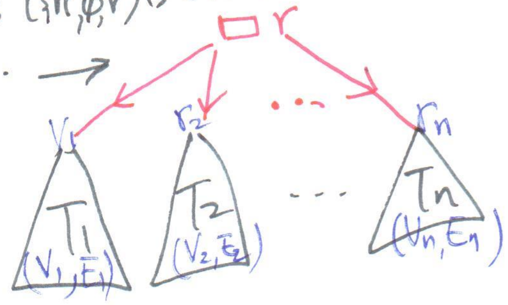
(mathematics (?))

P.L.

rooted Tree

basis $(\{r\}, \emptyset, r)$ is a r.T.

ind. $\rightarrow$




한글 잘 쓰기

1. 번역의 탄생
2. 부산대, 문장교정기 (한국어)

http://speller.cs.pusan.ac.kr/