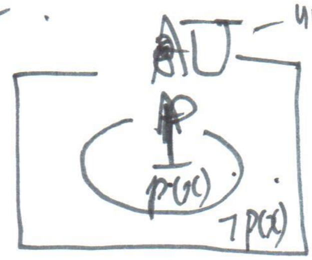
5/23 (月) 제 21 강 Tree.

Set. $A = \{a \in U \mid p(x)\}$



∪ ∩ − …

∈ A × B (고 X × Y — 좌표평면)

(a,b)
└ ordered pair

└ y = f(x) 함수 graph $G = \{(x,y) \in X \times Y \mid y = f(x)\}$

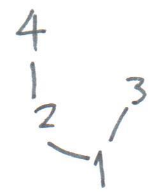
R ⊆ A × B — relation — graph (V, E) E ⊆ V × V

G =

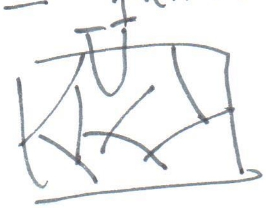
f : A → B .. function

relation : equivalent rel. — partial order

예 (N, =) antysmm. , trans.



= partition



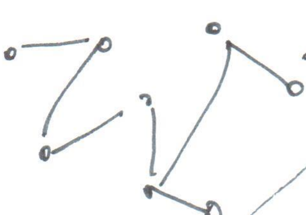
Chap 11 Tree — 뿌리, 나무 가지.
나무

→ 그래프의 일종 T = (V, E)

Tree
• a connected acyclic graph.

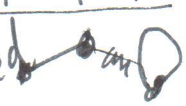
연결, cycle
O   X

• |V| = |E| + 1

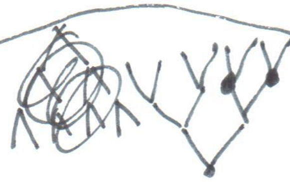


• a linear list 는 tree 이다.

connected

X



역가계도
full binary

$2^n - 1$

-2

$2^{20} = (2^{10})^2 \doteq (K)^2 = M$

$2^{32} = (2^{10})^3 \cdot 2^2 = 4(K)^3$

$= 4G$

영어 (10^3). . .

Tree

… a minimal connection of vertices

the smallest # of edges.

$$|E| = |V| - 1$$

level (항렬)

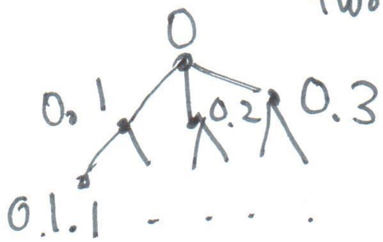
가계도와 촌수 (distance between two vertices.

rooted tree (뿌리 나무)

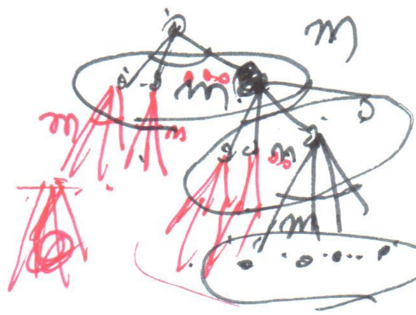
$T_r = (V, E, r)$

특정 $r \in V$ 를 뿌리라 한다

height!



vertex – Root vertex
- internal vertex
- leaf vertex



$m \times i + 1 = n$

$n = l + i$ (m은 순서)

$mi + 1 = l + i$

$l = (m-1)i + 1$