lecture 20: RELATIONS. Label REVISION OF SET RELATED CONCEPTS. SET -> SYNTAX.

7 Collection of District Objects. -> Semantics. & Tomato, Potato, Okra, Mangolo, & Tomato, Potato, Okra, Mango, Okrajo. -> Semanties. [Tomato, Potato, Okra] -> Syntax. Az { 1, 2, 3}. Bz { a, b}. CARDINALITY: IAI -7 Syntax.
Number of element in a Set. LA123 1B122. Subst: C Syntax.

A CB that every element of A Should be in Set B. power Set: pow(A) -> Syntax.

All possible Subsets of a Set. Pow (B) 2 4 0, fat, 4bt, 491676. | POW (A) | = 21A1 = 23 = 8. | CLASS 6 (MATHS). Az P 2 9 3 MULTIPLICATION Az f 21213}. Bz faib?. 1 pow(A) (= 2 1 = 2° =1. pow(A) 2 & pp AKB2 & (1,a), (1,b), (2,a), (2,b), (3,12), (3,6)} CLASS 4 (MATHS). -15 -4 27 LANBIZ IAI NBI

LANBIZ IAI NIBI z 3 N 2 2 6. CLASS 4 (MATHS) -15 -, 4 27

Pow (A) z Sets.

ARB z tuples. A z Singeltons.

RELATIONS.

Binearey RELATIONS: Two Sets A &B.

A binary relation from A to B
is a subset of AXB.

Azd 212137. Bzdarbe.

AKB2 & (1,a), (1,b), (2,a), (2,b), (3,a), (3,b)} (pow(AAB)) 2 2 HABI 2 2 MINBI = 2 3 x2 2 64.

Pow (AAB) 2 \$ 4, \$ (1,0)}, \$ (2,0)], \$ (2,0)], \$ (2,0)}, ----

\$ (1,a), (1,b) \(\frac{1}{2} \) \(\lambda \) (2,a) \(\frac{1}{2} \). Do it yourself.

1Al = 3 (Bl = 2).

LANB) 26. LIPOW (AAB) 264

1A125

1B1 24

Alzn

BIZN.

P460: ER3. Azfor 1,28 Bzfa168.

\$(0,a), (0,b), (1,a), (2,b)s

P461 :- Bol. Az & 1,2,3,43.

AxAz ((2,9), (1,2), (3,3), (3,4) (2/1) (2/2) (2/3) (1/3)

a divided by b.

AKAZ 7(2,9),(1,2),(1,3),(2,4)_	a ouvilled by b.
(2/2), (2/2), (2/3), (2/4) (3/2), (3/2), (3/3), (3/4) (4/6), (4/2), (4/3), (4/4)	a dirides b b
(3/2), (3/3), (3/3), (3/4)	a desdu b
(4,2), (4,3), (4,4)	a.
[2] (1/1)((1,2),(1,3), (1,4),(2,4),(2,2)), (3,3), (4,4)}
	•
1) Reflexive 2) Symmetric 3) Auti	Symmetry W) Transitive
	Symmetric 4) Transitive.
Rollieure: Robbind on Aus.	T
Roflianci & defind on AM. Va EA (a) a) ER. RX7-462. Az & 1,2,3,4,6,	(21) ER A (24) ERA
Ya EA (aia) ER.	(3,3) ERN (4,4) ER
8x7-462. Az & 1,2,3,46,	
	T.
Raz & (1,11), (1,2), (2,1), (3,4), (4,1),	(4,4)
422 d }.	
R3 = 2(2,2), (2,9), (2,9) }.	
R3 Z	
1 2 ? Po it at home.	
R6 2 141/9/2011	