fair -> hilesiz toss -> gazi-tura atmak sets > kineler subsets -> ale kimple, - A C 3 Zistegers N, satural sumbers R, real numbers Q, rasgonel a 6+0 Superset -> A Biz: leapsiger demet Universal set 1

Union-U' A on B Intersection \( A and B Complement A, A, Ā Diffrence A-B

Disjoint sets AMI = Ø (empts set)

Partition AllAz... An are disjoint and  $A_1 \cup A_2 \dots A_n = \Omega$ De morganis lun - (AMB) = AUB Lo (AUB) = A'OB' Distriblice law -> AU (BMC) = (AUB) M(AUC) GAN(BUC) = (ANB) U(ANC) Range fullin alabildigi tim degenler f(x)=1 and f(x)=2 olomaz f(1)=1 and f(-1)= 1 plabilir f(x) taninsiz olamaz Contable -> finite or enumarateable N {1,2,3...} infinite and countable 600001, infinite and countrible Power set -> 2<sup>n</sup> -> all subsets

Exhau stive set >> AUBUC ... UN = S ise

Lokesia in orensiz

Outcome -> (, let,

Event -d-rum C Sample space

probabilits axioms

P(A) > 0

contable collection

P(S) = 1

Codisjoint (> 1,2(A1) AP(A) = P(A1UA2)

6 rules -> P(A)=1-P(A°)

P(Ø)=0

 $P(A) \leq 1$   $P(A - B) = P(A) - P(A \cap B)$ 

P(AUB) = P(A) 1P(B) - P(AOB)

if A < B -> P(A) < P(B)

Calcolating Prol -> P(A) = |A|

Conditional prob. P(A/13)-P(AMB)

Chair rule P(AMBMC)=P(C).P(B/C).P(A/DC) independence -> PCA/B)=P(A) (> P(A))=P(A)

> 3 events P(ANBAC) = P(A).P(D).P(C) Bol. Bo Le a partition  $P(A) = \leq P(A \cap B_1) \rightarrow (A \cap B_2) - P(A)$ 

# Boyes role P(A/B) = P(B/A).P(A) PCB)

wass -syol

Multiplication Pricciple 1-71 2-, nz

possible outcomes = n<sub>1</sub> x n<sub>2</sub>... n<sub>k</sub> Choose -> secme Replacement -> Torbuga atmal, Ordering -> Siral 1 -> permit asyon ordered sampling with replacement (R) or me sampling with replacement (R) or me elemans Ordered sampling without replacement Lon! (n-k)