### ST/02 Week 3

# Def (Sex operations)

i> Intersection

iis Union

iii) Complement





# Prop. (Some laws)

Commutative: ANB=BNA, AUB=BUA

Associative: AN(BNC) = (ANB) AC

AU (BUC) = (AUB)UC

Distributive: An (BUC) = (ANB)U(ANC)

AU (BAC) = (AUB) A (AUC)

Def. (Partition)  $\begin{cases}
B_i, & A \\
\end{bmatrix}$   $\begin{cases}
B_i & A
\end{cases}$   $\begin{cases}
B_i & A
\end{cases}$ 

,;) Bi (Bj = \$ , \v i + j

# Some interesting facts:

1) (AMB) U(AMC) D(AMB) (AMC)

= ANBNANC = (ANA) N(BNC)

 $= A \cap (B \cap c) = A \cap B \cap C$ 

2) AC OBCOCC = (ACOBC) OCC

= (AUB) CACC

= ((AUB)Uc)c

= (AUBUC) C Tao Ma All Rights Reserved