

CONJUNTS

Suposem $A, B, C \subset X$.

$$(1) A^c = X \setminus A$$

$$(2) (A^c)^c = A, \quad A \cup A^c = X$$

$$(3) A \cup A = A, \quad A \cap A = A$$

$$(4) (A \cup B)^c = A^c \cap B^c$$

$$(5) (A \cap B)^c = A^c \cup B^c$$

$$(6) (A \cup B) \cap C = (A \cap C) \cup (B \cap C)$$

$$(7) (A \cap B) \cup C = (A \cup C) \cap (B \cup C)$$

$$(8) A \subset B \Rightarrow B^c \subset A^c$$

Suposem $f: A \rightarrow B$ una aplicació. $\{A_j\}_{j \in J}$, $A_j \subset A$.

$$(9) f\left(\bigcup_{j \in J} A_j\right) = \bigcup_{j \in J} f(A_j)$$

$$(10) f\left(\bigcap_{j \in J} A_j\right) \subset \bigcap_{j \in J} f(A_j)$$

$$(11) f^{-1}\left(\bigcup_{j \in J} A_j\right) = \bigcup_{j \in J} f^{-1}(A_j)$$

$$(12) f^{-1}\left(\bigcap_{j \in J} A_j\right) = \bigcap_{j \in J} f^{-1}(A_j)$$

$$(13) f^{-1}(A_j^c) = \left(f^{-1}(A_j)\right)^c$$