**1.** $A \cup (A \cap B) = A$.

**2.** $A \cap (A \cup B) = A$.

**3.** $A \subset B \iff A \cap B = A \iff A \cup B = B$.

**4.** $A \Delta B = (A \setminus B) \cup (B \setminus A)$.

**5.** Siano $A, B \subset X$. Allora $A \subset B \iff X \setminus B \subset X \setminus A$.

**6.** Sia $A \subset X$. Allora $X \setminus (X \setminus A) = A$.

**7.** Siano $A, B \subset X$. Allora $X \setminus (A \cup B) = (X \setminus A) \cap (X \setminus B)$.

**8.** Siano $A, B \subset X$. Allora $X \setminus (A \cap B) = (X \setminus A) \cup (X \setminus B)$.

**9.** Sia $A_i \subset X$ per ogni $i \in I$. Allora
$X \setminus \bigcup\limits_{i \in I} A_i = \bigcap\limits_{i \in I} (X \setminus A_i)$
$X \setminus \bigcap\limits_{i \in I} A_i = \bigcup\limits_{i \in I} (X \setminus A_i)$.

**10.** $B \cup \bigcap\limits_{i \in I} A = \bigcap\limits_{i \in I} (B \cup A_i)$.

**11.** $B \cap \bigcup\limits_{i \in I} A = \bigcup\limits_{i \in I} (B \cap A_i)$.

**12.** $\bigcup\limits_{n=1}^{\infty} (\frac{1}{n}, 1] = (0, 1]$.

**13.** $\bigcap\limits_{n=1}^{\infty} [0, \frac{1}{n}) = \{0\}$.

**14.** $\bigcap\limits_{n=1}^{\infty} (0, \frac{1}{n}) = \emptyset$.
Dare due dimostrazioni.

**15.** $A \subset B \Longrightarrow (B \setminus A) \cup A = B$.

**16.** Siano $a, b, c$ insiemi. Allora esiste un insieme $X$ con $X = \{a, b, c\}$.