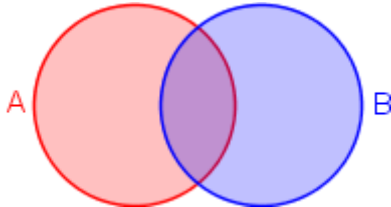


Mengenalgebra (Boolesche Algebra)

(1) Kommutativgesetze

$$A \cap B = B \cap A$$

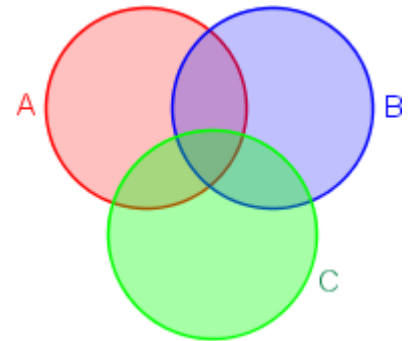
$$A \cup B = B \cup A$$



(2) Assoziativgesetze

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

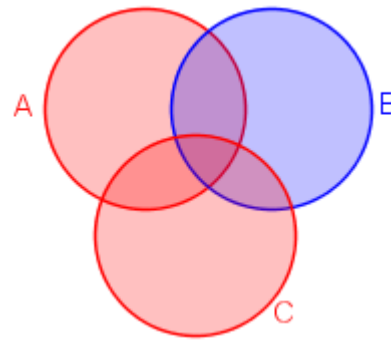
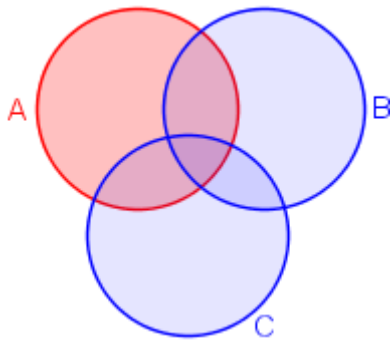
$$(A \cup B) \cup C = A \cup (B \cup C)$$



(3) Distributivgesetze

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

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



(4) Gesetz für das Komplement  $A \cap \bar{A} = \{\}$  und  $A \cup \bar{A} = G$

(5) Gesetze für G und  $\{\}$   $A \cap G = A$   $A \cup G = G$

$$A \cap \{\} = \{\}$$

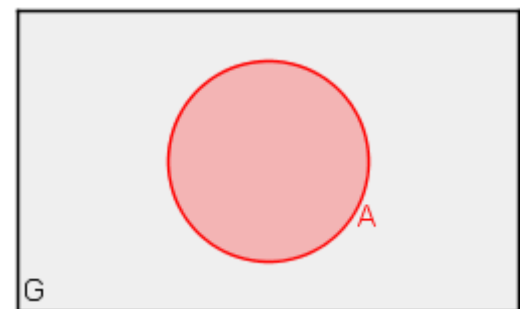
$$A \cup \{\} = A$$

$$A \cap A = A$$

$$A \cup A = A$$

$$\bar{\{\}} = G$$

$$\bar{G} = \{\}$$



(6) Gesetze von DeMorgan  $\overline{A \cap B} = \bar{A} \cup \bar{B}$  und  $\overline{A \cup B} = \bar{A} \cap \bar{B}$

