

# ZÁKONY BOOLEOVY ALGEBRY

KOMUTATIVITA :  $A+B = B+A$  ;  $AB = BA$

ASOCIATIVITA :  $A+(B+C) = (A+B)+C$  ;  $A(BC) = (AB) \cdot C$

DISTRIBUTIVITA :  $A+(BC) = (A+B)(A+C)$  ;  
 $A(B+C) = (AB) + (AC)$

NEUTRALITA 0 a 1 :  $A+0 = A$  ;  $A \cdot 1 = A$

VLASTNOSTI KOMPLEMENTU :  $A+\bar{A} = 1$  ;  $A \cdot \bar{A} = 0$

AGRESIVITA 0 a 1 :  $A \cdot 0 = 0$  ;  $A+1 = 1$

IDEMPOTENCE :  $A \cdot A = A$  ;  $A+A = A$

DVOJÍ NEGACE :  $\bar{\bar{A}} = A$

ABSORPCE :  $A+AB = A$  ;  $A(A+B) = A$

ABSORPCE NEGACE :  $A+\bar{A}B = A+B$  ;  $A(\bar{A}+B) = AB$   
 $\bar{A}+AB = \bar{A}+B$

CONSENSUS :  $AB+\bar{A}C+BC = A+B+\bar{A}C$   
 $(A+B)(\bar{A}+C)(B+C) = (A+B)(\bar{A}+C)$

## AXIOMY BOOLEOVY ALGEBRY:

$$1 \cdot 1 = 1$$

$$0 + 0 = 0$$

$$1 \cdot 0 = 0$$

$$0 + 1 = 1$$

$$0 \cdot 0 = 0$$

$$1 + 1 = 1$$

$$\bar{1} = 0$$

$$\bar{0} = 1$$

ZÁKONY DE MORGANOVY

$$\begin{cases} 1) \overline{A+B+C+\dots} = \bar{A} \cdot \bar{B} \cdot \bar{C} \cdot \dots \\ 2) \overline{A \cdot B \cdot C \cdot \dots} = \bar{A} + \bar{B} + \bar{C} + \dots \end{cases}$$