

Potenzmenge

$\{x; y; z\}$

x	y	z		
0	0	0	$\rightarrow$	$\{\}$
1	0	0	$\rightarrow$	$\{x\}$
0	1	0	$\rightarrow$	$\{y\}$
0	0	1	$\rightarrow$	$\{z\}$
1	1	0	$\rightarrow$	$\{x; y\}$
1	0	1	$\rightarrow$	$\{x; z\}$
0	1	1	$\rightarrow$	$\{y; z\}$
1	1	1	$\rightarrow$	$\{x; y; z\}$



S. 21 Nr 3 $A = \{1; 2; 3; 4; 6; 8; 10; 12\}$ 116
 $B = \{1; 3; 5; 7; 9; 11; 13\}$

a) $A \cap B = \underline{\underline{\{1; 3\}}} = \{x \in \mathbb{N} \setminus \{2\} \mid x \leq 3\}$
 $= \{x \in \mathbb{N} \mid x \leq 3 \wedge x \bmod 2 < 0\}$

b) $A \cup B = \{1; 2; 3; \dots; 11; 12; 13\}$
 $= \{x \in \mathbb{N} \mid x \leq 13\}$

c) $A \setminus B = \{2; 4; 6; 8; 10; 12\}$
 $= \{x \in \mathbb{N} \mid x \bmod 2 = 0 \wedge x \leq 12\}$

d) $B \setminus A = \{5; 7; 9; 11; 13\}$
 $= \{x \in \mathbb{N} \setminus \{1; 3\} \mid x \bmod 2 < 0 \wedge x \leq 13\}$
 $\{x \in \mathbb{N} \mid x \bmod 2 < 0 \wedge 5 \leq x \leq 13\}$

S 28 1)

$$\begin{array}{l} A \cap (A \cup B) \\ (A \cup \emptyset) \cap (A \cup B) \\ A \cup (\emptyset \cap B) \\ A \cup \emptyset \\ A \end{array} \left\{ \begin{array}{l} \text{neutral} \\ \text{Distribution} \\ \text{Idempotent} \\ \text{neutral} \end{array} \right.$$

$$\begin{array}{l} A \cup (A \cap B) \\ (A \cap \Omega) \cup (A \cap B) \\ A \cap (\Omega \cup B) \\ A \cap \Omega \\ A \end{array}$$