



$$C \setminus (A \cup B) = \{7, 8\}$$

$$C \setminus A \cup B = \{3, 4, 5, 6, 7, 8\}$$

$$\{5, 7, 8\} \cup \{3, 4, 5, 6\}$$

$$2) A = \{8; \underline{9}; 10; 12; 14; \underline{15}; 16; 18; 20; \underline{21}; 22\}$$

$$B = \{7; \underline{9}; 11; 13; \underline{15}; 17; 19; \underline{21}; 23\}$$

$$a) \boxed{A \cap B} = \{9; 15; 21\} = \{x \in [9; 21]_{\mathbb{N}} \mid x \bmod 3 = 0 \wedge x \bmod 6 \neq 0\} \\ \{x \in [9; 21]_{\mathbb{N}} \setminus \{12; 18\} \mid x \bmod 3 = 0\}$$

$$b) A \cup B = \{7; 8; \dots; 22; 23\} = x \in [7; 23]_{\mathbb{N}}$$

$$c) A \setminus B^* = \{8; 10; 12; 14; 16; 18; 20; 22\} \\ = \{x \in [8; 22]_{\mathbb{N}} \mid x \bmod 2 = 0\}$$

$$d) B \setminus A^* = \{7; 11; 13; 17; 19; 23\} \\ = \{x \in [7; 23]_{\mathbb{N}} \mid x \bmod 2 \neq 0 \wedge x \bmod 3 \neq 0\}$$

$$\overline{50 - 8} = \overline{42} \leftarrow$$

L,  $\overline{50} + \overline{8} = 40 + 2 = 42$

neutral zu der Addition  $\hat{=} 0$  ; zu Multiplikation  $\hat{=} 1$

$$4 \cdot x - 9 = 7 \quad | +9$$

$$4 \cdot x - 9 + 9 = 7 + 9$$

$$4 \cdot x \overbrace{+ 0}^{\wedge} = 16 \quad | \cdot 1/4$$

$$1/4 \cdot 4 \cdot x + 0 = 16 \cdot 1/4$$

$$\underline{1 \cdot} x + 0 = 4$$

$$x = 4$$

verteilte Erweiterung

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

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

$A \cap (A \cup B)$

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

$A \cup (A \cap B)$

distri.

$(A \cap \Omega) \cup (A \cap B)$

$A \cap (\Omega \cup B)$

Idemp.

$A \cap \Omega$

distri.

verteilte

$A$

Kompl.



$$\overline{\overline{A \cup B} \cup \overline{A \cup \bar{B}}}$$

$$\overline{\overline{A \cup B} \cap \overline{\overline{A \cup \bar{B}}}}$$

$$(A \cup B) \cap (A \cup \bar{B})$$

$$A \cup (B \cap \bar{B})$$

$$A \cup \{\}$$

$$A$$

de Morgan.

doppelte Negation

dist.

Komplement

neutral

$$0,\overline{32} = \frac{32}{99}$$

$$\frac{4}{9} = 0,\overline{4}$$

$$\frac{123}{999} = 0,\overline{123}$$

$$0,0\overline{2} = \frac{2}{9} \cdot \frac{1}{10} = \frac{2}{90}$$