

$\cup$  : Vereinigungsmenge

$\cap$  : Schnittmenge

$\setminus$  : Differenzmenge

$\overline{\phantom{x}}$  : Komplementärmenge ("Gegenteil der  
Grundmenge")

$$A \cap B = \{1, 7\}$$

$$A \cup C = \{1, 3, 4, 5, 7, 8\}$$

$$A \cap B \cap C = \{7\} \quad \bar{C} = \{1, 2, 3, 4, 6\}$$

$$A \cup \bar{C} = \{1, 3, 4, 5, 7, 2, 6\} = \{1, 2, 3, 4, 5, 6, 7\}$$

$$B \cap \bar{C} = \{1, 2, 6\}$$

$$C \cup A \cup B = \{5, 7, 8, 1, 3, 4, 2, 6\} = \Omega$$

$$B \setminus C = \{1, 2, 6\}$$

$$C \setminus B = \{5\}$$

$$A \cup B = \{1, 3, 4, 5, 7, 2, 6, 8\} = \Omega$$

$$\overline{(A \cup B)} = \{\}$$

$$\overline{(A \cup B)} \cap C = \{\}$$

$$(A \cup B) \setminus C = \{1, 2, 3, 4, 6\}$$

$$(B \setminus C) \cap A = \{1\} \quad A \setminus C = \{1, 3, 4\}$$

$$A \cap (A \setminus C) = \{1, 3, 4\}$$

Potenzmenge zu einer Menge  $M$  ist die Menge aller Teilmengen die zu  $M$  gebildet werden können

$$M = \{1, 2, 3\}$$

$$P(M) = \{ \{\}, \{1\}, \{2\}, \{3\}, \{1, 2\}, \{1, 3\}, \{2, 3\}, \{1, 2, 3\} \}$$

$$|P(M)| = 8 = 2^3 = 2^{|M|}$$

$$P(\mathbb{T}) = \left\{ \begin{aligned} & \{\}, \{1\}, \{3\}, \{5\}, \{7\}, \\ & \{1, 3\}, \{1, 5\}, \{1, 7\}, \{3, 5\}, \\ & \{3, 7\}, \{5, 7\}, \{1, 3, 5\}, \{1, 5, 7\} \\ & \{3, 5, 7\}, \{1, 3, 7\}, \{1, 3, 5, 7\} \end{aligned} \right\}$$

$$5 / 2 = 2,5$$

$$5 \text{ div } 2 = 2$$

$$5 \text{ mod } 2 = 1$$

div : ganzzahlige Divisionsergebnis  
mod : ganzzahligen Divisionsrest

$$0 / 4 = 0$$

$$1 / 4 = 0,25$$

$$2 / 4 = 0,5$$

$$3 / 4 = 0,75$$

$$4 / 4 = 1$$

$$5 / 4 = 1,25$$

$$6 / 4 = 1,5$$

$$7 / 4 = 1,75$$

$$8 / 4 = 2$$

$$0 \text{ div } 4 = 0$$

$$1 \text{ div } 4 = 0$$

$$2 \text{ div } 4 = 0$$

$$3 \text{ div } 4 = 0$$

$$4 \text{ div } 4 = 1$$

$$5 \text{ div } 4 = 1$$

$$6 \text{ div } 4 = 1$$

$$7 \text{ div } 4 = 1$$

$$8 \text{ div } 4 = 2$$

$$0 \text{ mod } 4 = 0$$

$$1 \text{ mod } 4 = 1$$

$$2 \text{ mod } 4 = 2$$

$$3 \text{ mod } 4 = 3$$

$$4 \text{ mod } 4 = 0$$

$$5 \text{ mod } 4 = 1$$

$$6 \text{ mod } 4 = 2$$

$$7 \text{ mod } 4 = 3$$

$$8 \text{ mod } 4 = 0$$

$$0 \bmod 2 = 0$$

$$\textcircled{1} \bmod 2 = 1 \leftarrow$$

$$2 \bmod 2 = 0$$

$$\textcircled{3} \bmod 2 = 1 \leftarrow$$

$$4 \bmod 2 = 0$$

$$\textcircled{5} \bmod 2 = 1 \leftarrow$$

$$6 \bmod 2 = 0$$

$$\textcircled{7} \bmod 2 = 1 \leftarrow$$

$$\mathbb{N} = \{0, 1, 2, 3, 4, 5, 6, 7, \dots\}$$

$$\mathbb{E} = \{0, 2, 4, 6, \dots\}$$

↑ gerade Zahlen

$$\mathbb{U} = \{1, 3, 5, 7, \dots\}$$

↑ ungerade Zahlen

$$\mathbb{U} = \{x \mid x \in \mathbb{N} \wedge x \bmod 2 = 1\}$$

$$\mathbb{E} = \{x \mid x \in \mathbb{N} \wedge x \bmod 2 = 0\}$$