

$$1) \quad M = \{ x \in ]-100; 100[_{\mathbb{Z}} \mid x \bmod 15 = 0 \}$$

$$\{ x \in \mathbb{Z} \mid |x| < 100 \wedge x \bmod 15 = 0 \}$$

$$2) \quad M = \{ x \in \mathbb{N}^{\geq 10} \setminus \{42\} \mid x \bmod 4 = 0 \wedge x \bmod 6 < 0 \}$$

$$\{ x \in \mathbb{N} \mid x \geq 10 \wedge x < 42 \wedge \dots \}$$

$$3) \quad M = \{ \text{Matrikelnummern aller Studenten} \}$$

$$H = \{ (x; y) \in M \times M \mid \text{Geburtsj.}(x) = \text{Geburtsj.}(y) \}$$

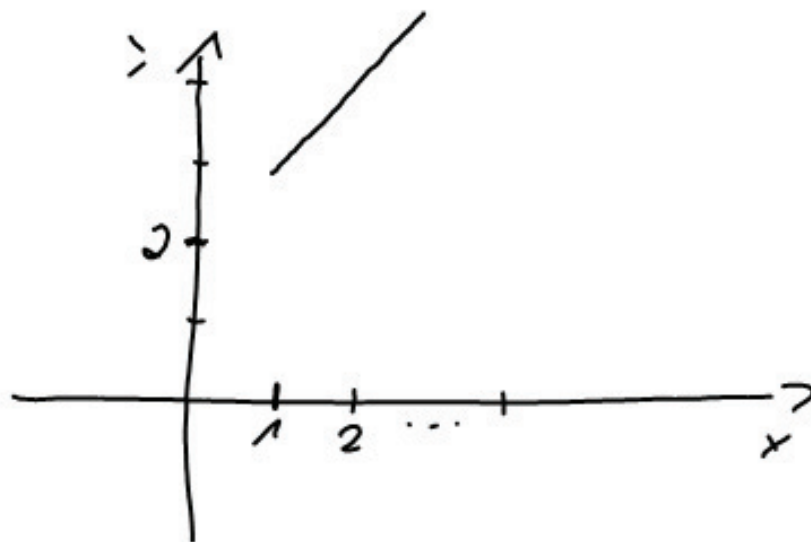
4)

HERZ

$$H = \{(x; y) \in \mathbb{N} \times \mathbb{N} \mid y = x + 2\}$$

$$(10; 12)$$

$$(42; 44)$$



$\mathbb{N}_0$

$$2) A = \{x \in \mathbb{Z} \mid x \bmod 5 = 0\}$$

$$= \{\dots, -15, -10, -5, 0, 5, 10, 15, \dots\}$$

$$A \cap B = \{-10, -5, 0, 5, 10\}$$

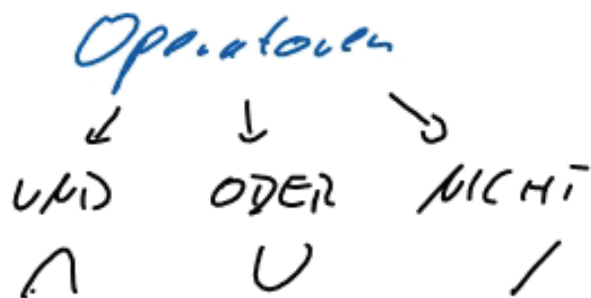
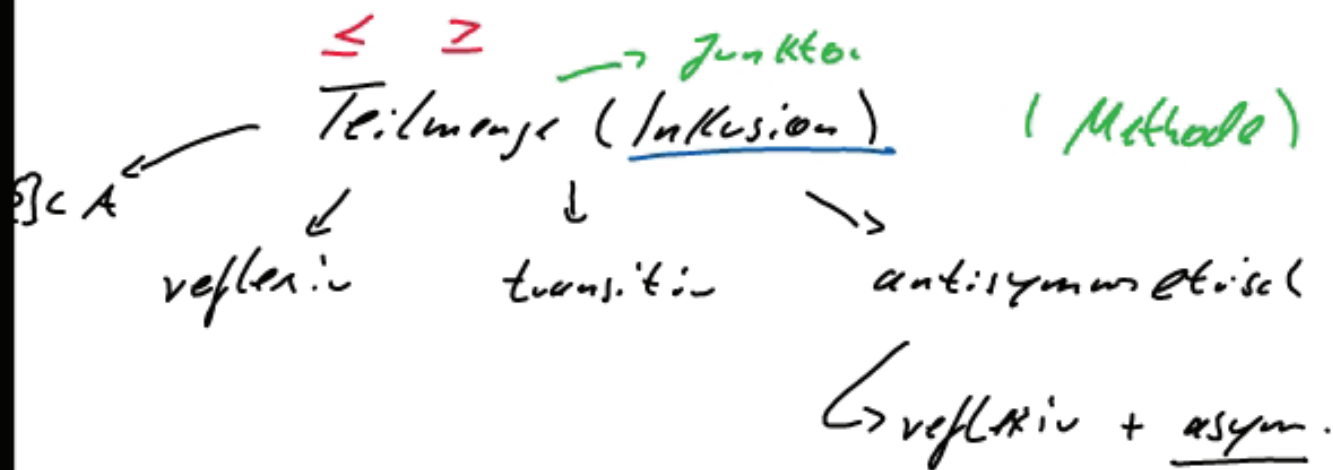
$$= \{x \in [-10, 10]_{\mathbb{Z}} \mid x \bmod 5 = 0\}$$

$$A \cup B = \{x \in \mathbb{Z} \mid (x \leq 10 \wedge x \geq -10) \vee x \bmod 5 = 0\}$$

$$A \setminus B = \{x \in \mathbb{Z} \setminus \{\pm 10, \pm 5, 0\} \mid x \bmod 5 = 0\}$$

$$B \setminus A = \{x \in [-9, 9]_{\mathbb{Z}} \setminus \{\pm 5, 0\}\}$$

Welche neuen Begriffe habe ich kennen gelernt?



Symmetrie

$\Rightarrow$  Anwendung mit Eigenschaften