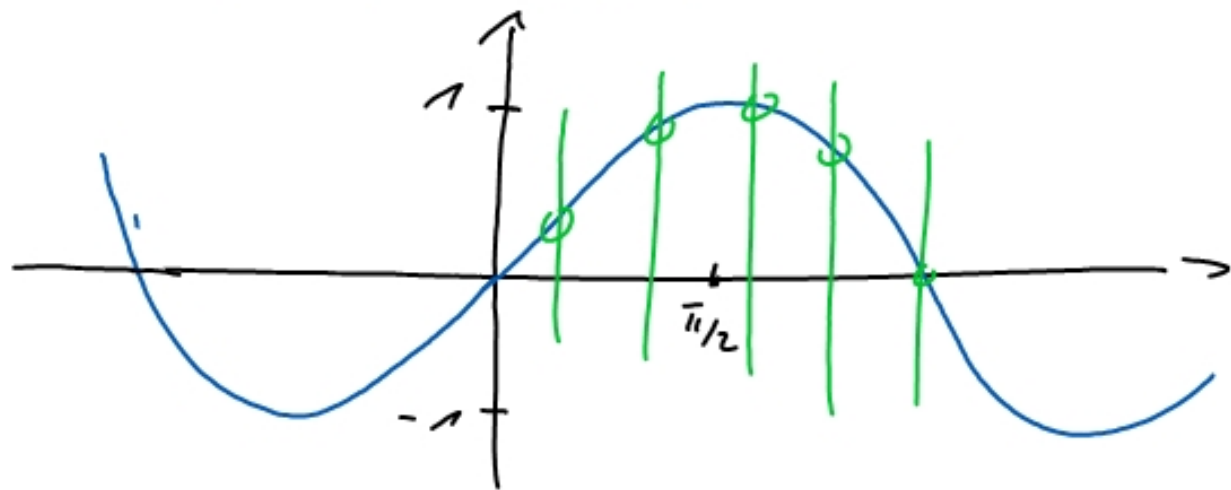


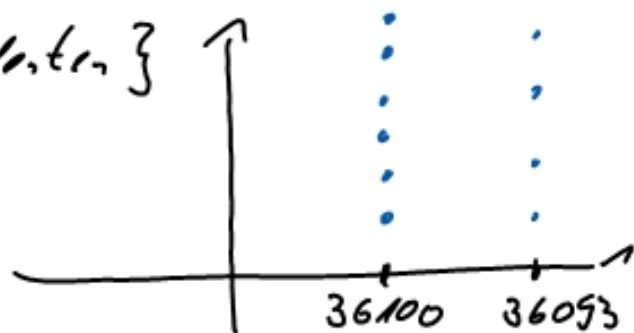
$$M = \{ (\underline{x}; \underline{y}) \in \underline{\mathbb{R}} \times \underline{[-1; 1]} \mid y = \sin(x) \}$$



$$S = \{ (x; y) \in S \times S \mid P(Z(x)) = P(Z(y)) \}$$

$S = \{ \text{Menge aller Studenten} \}$

$$V = \{ \vec{x} \in \mathbb{R}^3 \mid |\vec{x}| = 1 \}$$



$$\begin{aligned}
 S24 \ 1) \quad M &= \{x \in ]-100; 100[_{\mathbb{Z}} \mid x \bmod 15 = 0\} \\
 &= \{x \in \mathbb{Z} \mid (x > -100 \wedge x < 100) \wedge x \bmod 5 = 0 \\
 &\quad \wedge x \bmod 3 = 0\}
 \end{aligned}$$

$$\begin{aligned}
 2) \quad M &= \{x \in \mathbb{N}^{\geq 10} \setminus \{42\} \mid x \bmod 4 = 0 \wedge x \bmod 6 \neq 0\} \\
 &\quad x \in [10; \infty[_{\mathbb{N}} \setminus \{42\} \quad \wedge x \neq 42
 \end{aligned}$$

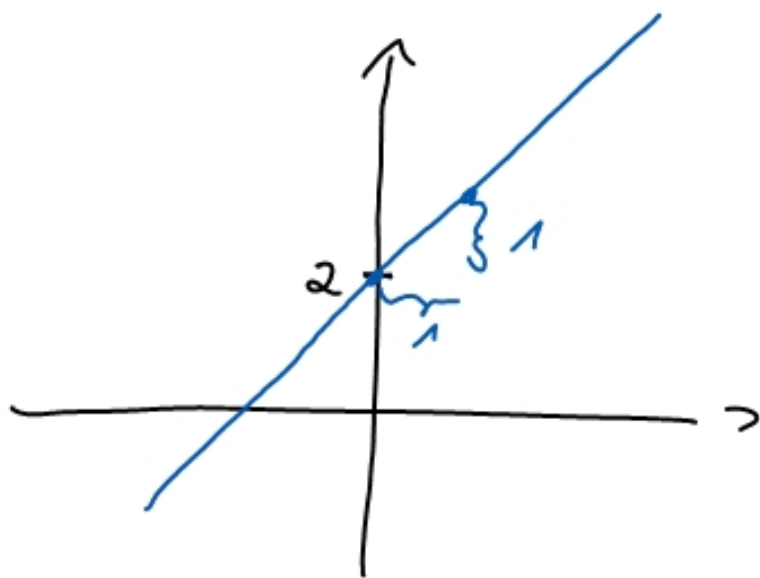
$$3) \quad S = \{\text{Studenten}\}$$

$$\begin{aligned}
 \heartsuit &= \{(x; y) \in S \times S \mid \underbrace{\text{Geb-Jahr}(x) = \text{Geb-Jahr}(y)}_{\text{verbale Bedingung}}\}
 \end{aligned}$$

$$4) \quad \textcircled{5} = \{(x; y) \in \mathbb{N} \times \mathbb{N} \mid y = x + 2\}$$

$$P_1(4|6) \quad P_2(8|10) \quad P_3(40|42)$$

$$P_4(10|12)$$



$$y = m \cdot x + b$$

$b$  = Achsenabschnitt  
Schnittpunkt y-Achse

$m \Rightarrow$  Steigung

$$m = \frac{a}{b} \quad \begin{matrix} \updownarrow \\ \rightarrow \end{matrix}$$

## Teilmenge

$\in$  : ist Element  $\Rightarrow$  Formel + hat sich verhalten

$\subset$  : echte Teilmenge

$\supset$  : unechte Teilmenge