1) $f(x) = x^2 - 6x + 8$

Schnittpunkt der Parabeln in den NS?

[2) $f(x) = 3 \cdot \cos^7(\frac{2}{3}x + 9{,}5\pi) - 4$]

3) $\sim = \{(x,y) \in \mathbb{R} \times \mathbb{R} \mid y - 4 = (x+4)^2\}$

4) $\pi = \{(a,b) \in \mathbb{R} \times \mathbb{R} \mid y + 3 = |2x - 4|\}$

$\Rightarrow$ Eigenschaften

$\Rightarrow$ kann bijektiv

5) $\ddot{\smile} = \{(a,b) \in \mathbb{Z}^+ \times \mathbb{Z}^+ \mid a = \frac{k}{5}; k \in \mathbb{Z}\}$

$$\heartsuit = \{(x,y) \in \mathbb{R} \times \mathbb{R} \mid y = \sin(x) + 2\}$$

$$\heartsuit_1 = (x_1 / y_1) \quad ; \quad \heartsuit_2 = (x_2 / y_2)$$

$$x_1 = x_2 \quad \Rightarrow \quad y_1 = y_2$$

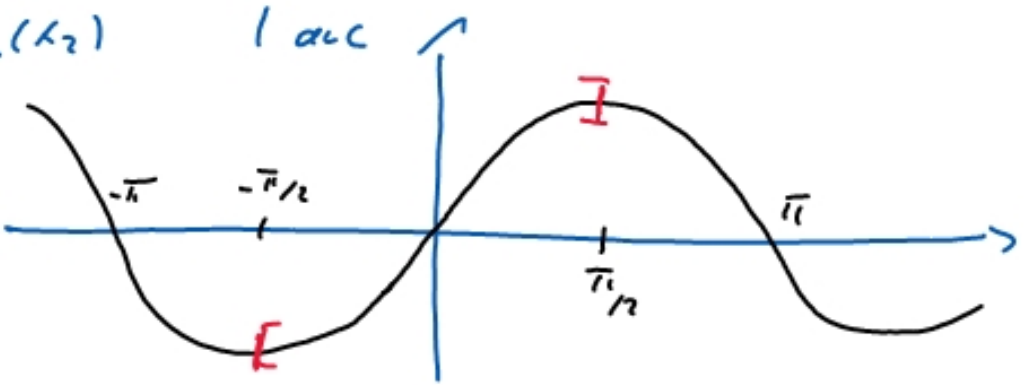
$$\heartsuit = \{(x,y) \in [-\tfrac{\pi}{2}; \tfrac{\pi}{2}] \times [1;3] \mid \dots\}$$

$$y_1 = y_2$$

$$\sin(x_1) + 2 = \sin(x_2) + 2 \quad | -2$$

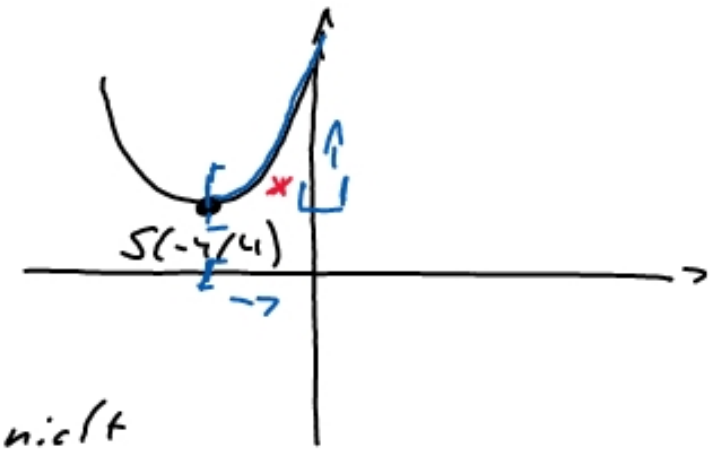
$$\sin(x_1) = \sin(x_2) \quad | \arcsin$$

$$x_1 = x_2$$



$f: \sim \{(x,y) \in \mathbb{R}^{\geq -4} \times \mathbb{R}^{\geq 4} \mid \ldots\}$

3) $y = (x+4)^2 + 4 \quad \Rightarrow \quad S(-4/4)$



- Funktion, da rechtseindeutig
- total, da $\mathbb{D} = \mathbb{R}$
- nicht surjektiv, da $y = 0$ nicht existiert,

$0 = (x+4)^2 + 4 \quad | -4$

$-4 = (x+4)^2 \quad | \sqrt{\ }$

$\sqrt{-4} \notin$

- nicht injektiv, da f.s. $y = 20$

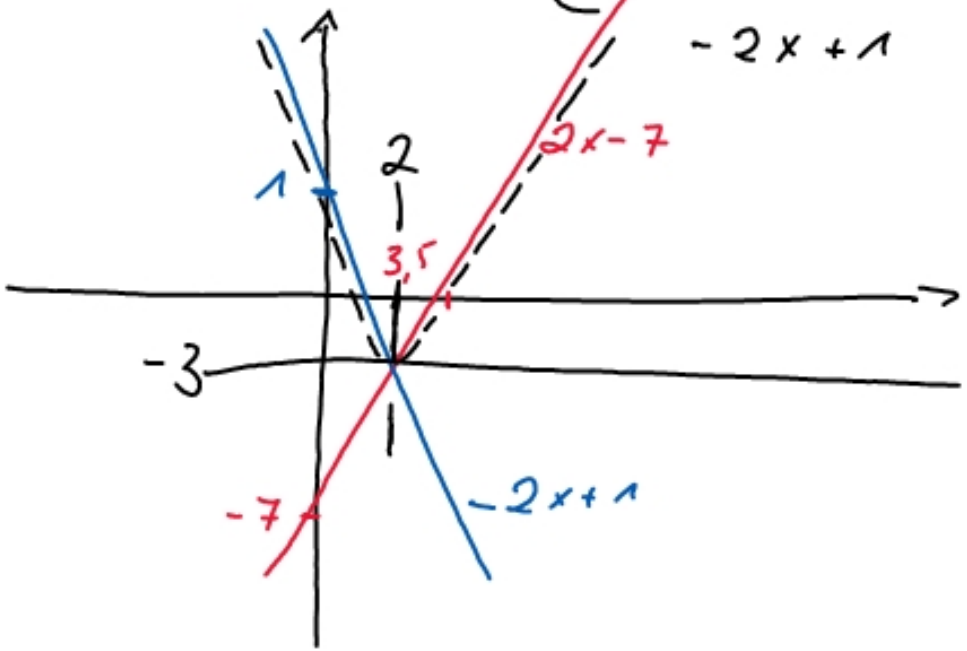
$20 = (x+4)^2 + 4 \quad | -4$

$16 = (x+4)^2 \quad | \sqrt{\ }$

$\pm 4 = x+4 \quad \Rightarrow x_1 = 0 \ \cup \ x_2 = -8$

4) $f(x) = |2x-4| - 3 = \begin{cases} 2x-7 & ; x \geq 2 \\ -(2x-4)-3 & ; x < 2 \end{cases}$

$= -2x+1$



$\# = \{(a,5) \in \mathbb{R}^{\geq 2} \times \mathbb{R}^{\leq -3} \mid 6+3 = |2a-4|\}$

$\mathbb{R}^{\leq 2}$

$y = m \cdot x + c$; $c = y$-Achse $\quad m = \frac{a}{b}$ ↕ →