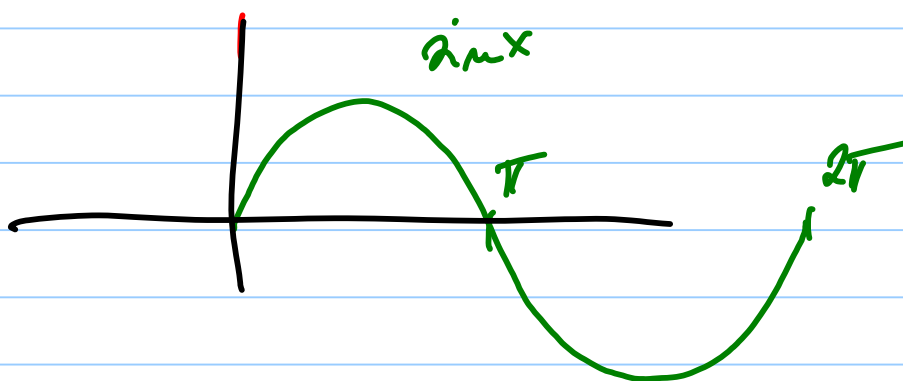
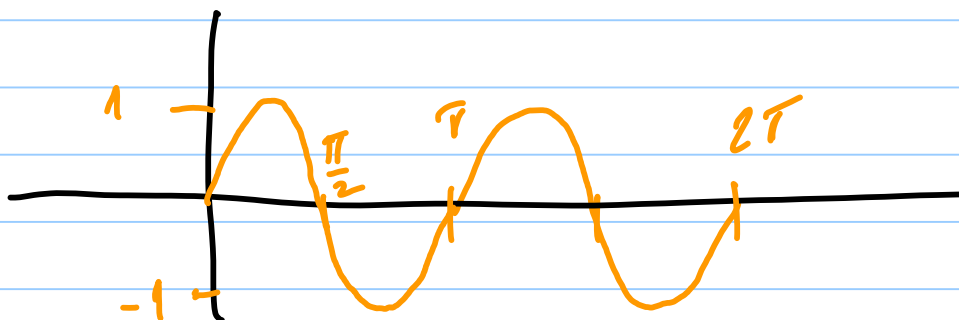


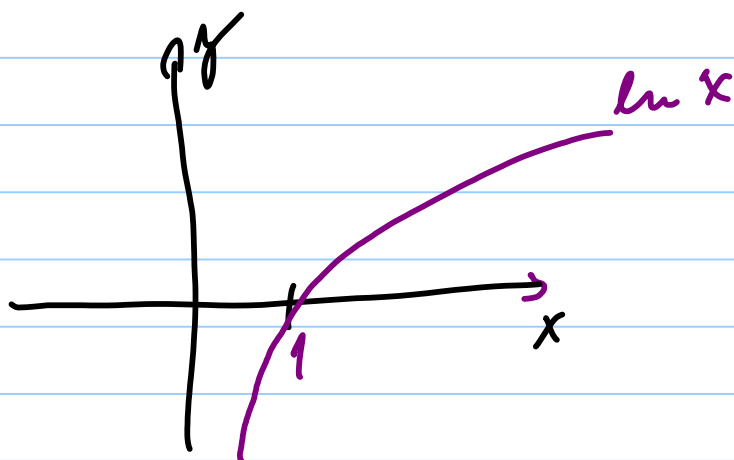
$$f(x) = \begin{cases} \frac{x^2 - 4}{x^2 + 3x + 2} & \forall x \in \mathbb{R} - \{-2, -1\} \\ 5 & x = -2 \end{cases}$$



$$\sin x = 0 \Leftrightarrow x = 0 + k\pi \quad k \in \mathbb{Z}$$

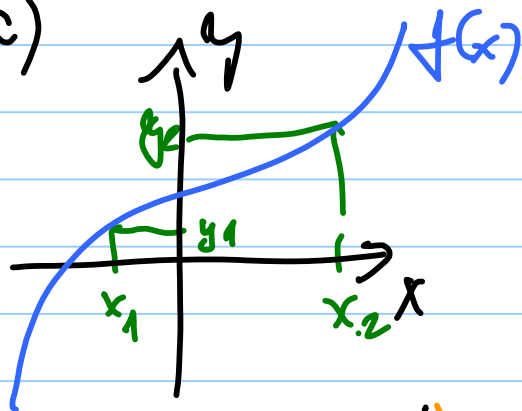


P2 $f(x) = \frac{|x+3|}{\ln(x-4)} + \sqrt{x-2}$

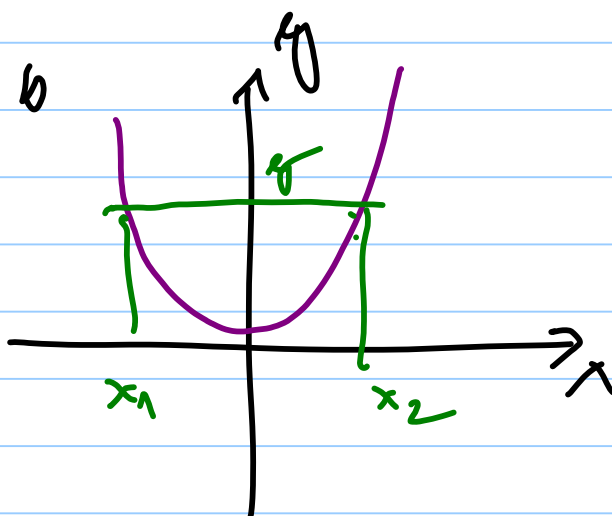


GRAFY FUNKCII

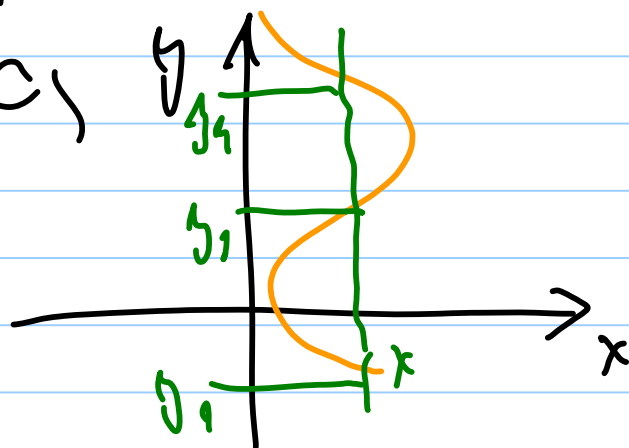
a)

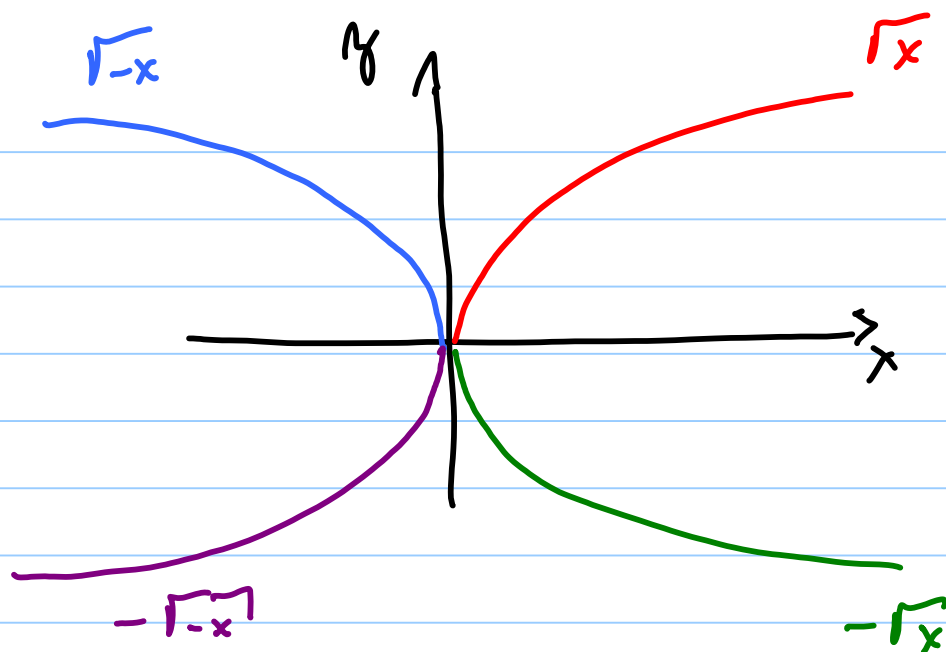


b)



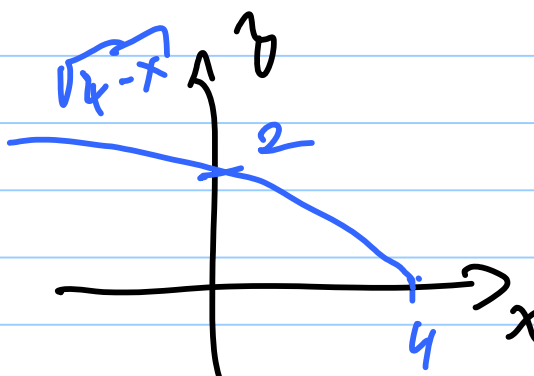
c)



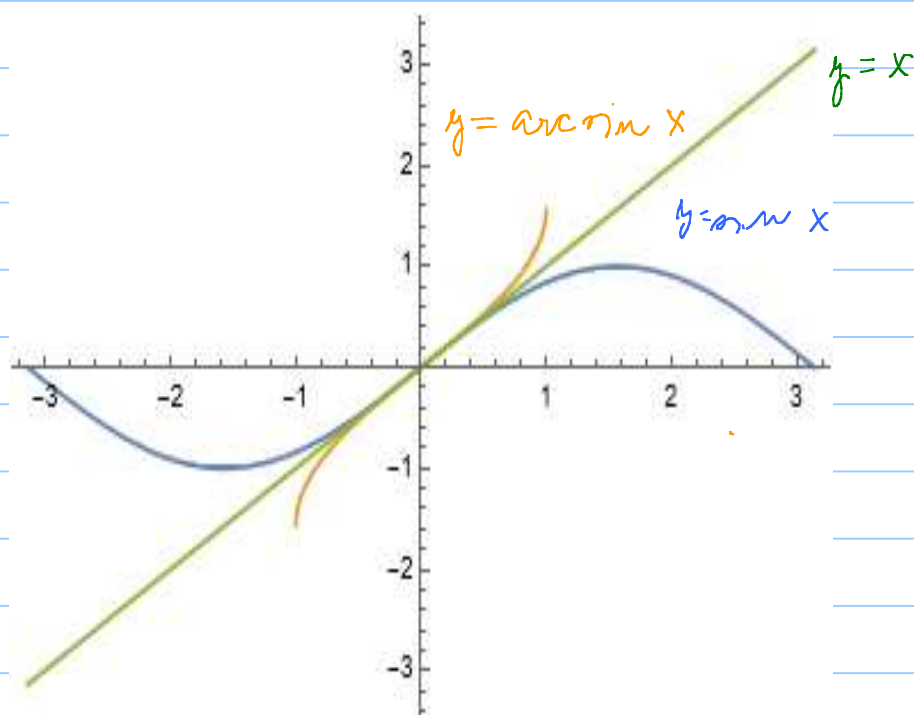


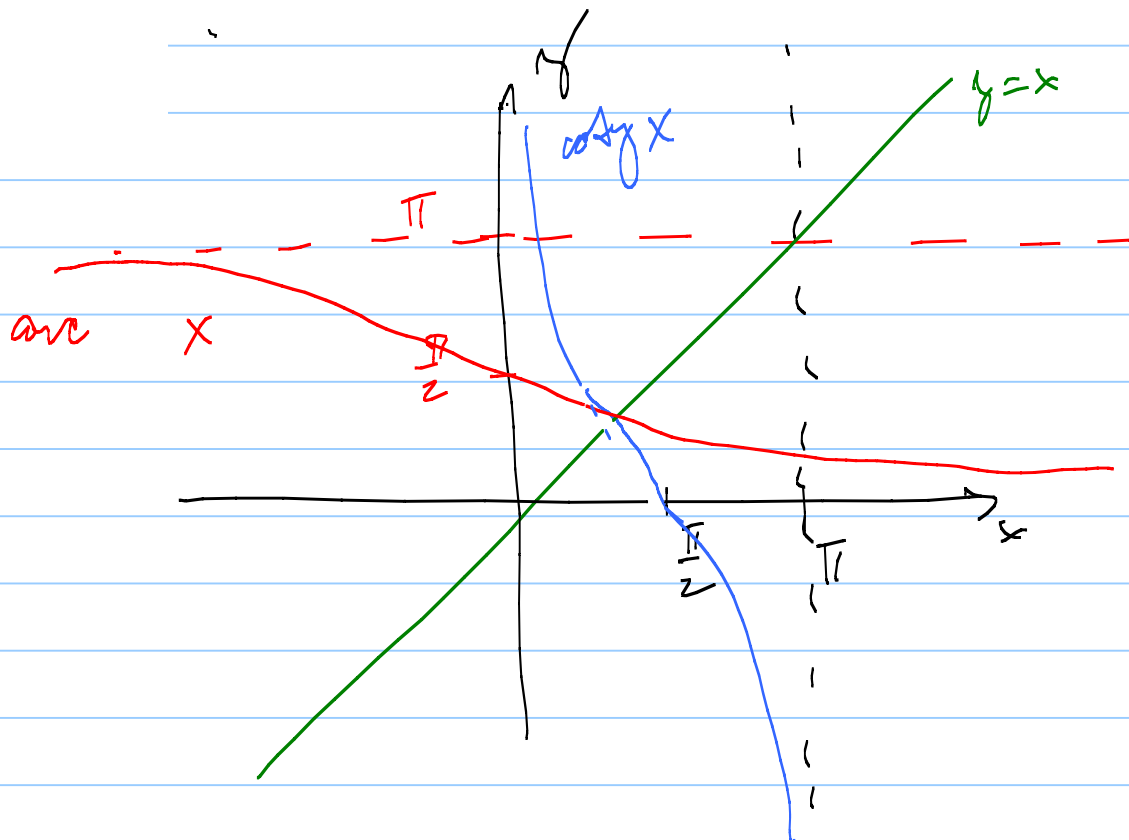
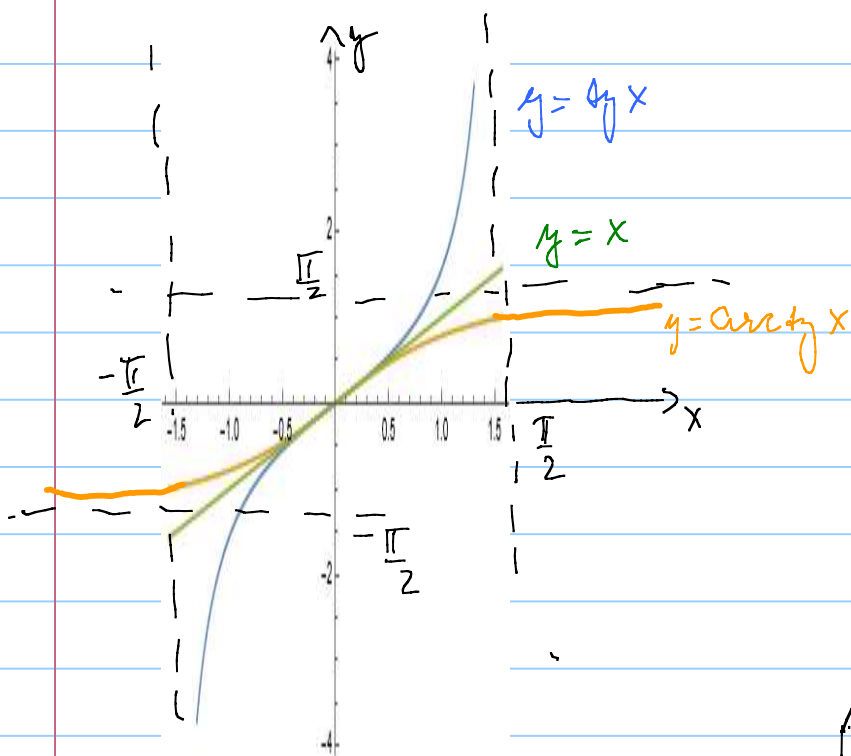
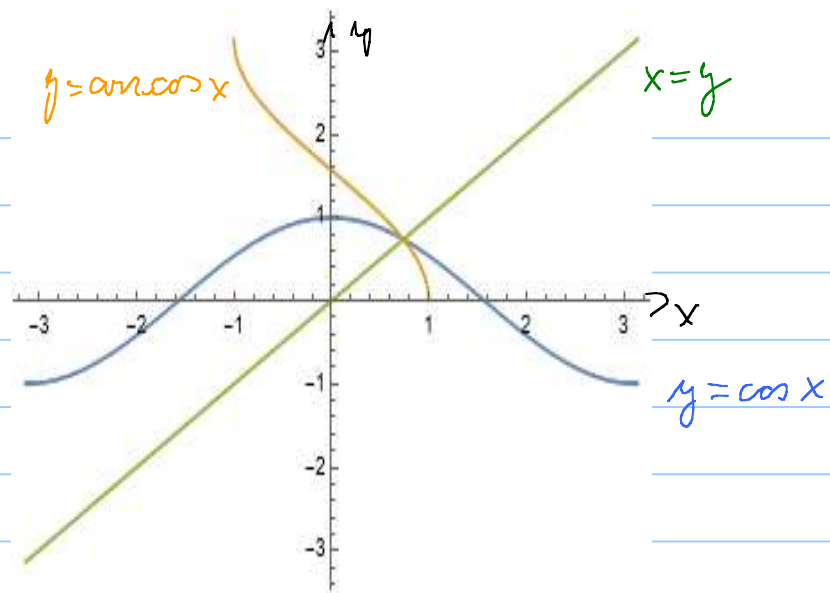
$$f(x) = \sqrt{4-x}$$

$$= (4-x)^{\frac{1}{2}}$$



TRIGONOMETRIČKE FUNKCIJE





DEF OBOZ FUNKCIE

$$f(x) = \arcsin\left(\frac{3}{x-2}\right)$$

$$1) \frac{*}{\Delta} \quad \Delta \neq 0 \Rightarrow x-2 \neq 0 \Rightarrow x \neq 2$$

$$2) \quad -1 \leq \frac{3}{x-2} \leq 1 \quad \arcsin(x) \quad \text{Def} = \langle -1, 1 \rangle$$

$$-1 \leq \frac{3}{x-2} \quad / +1$$

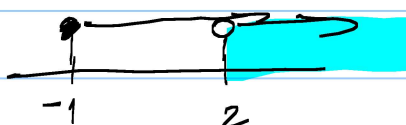
$$1. \quad 0 \leq \frac{3}{x-2} + 1$$

$$1. \quad 0 \leq \frac{3+x-2}{x-2} = \frac{x+1}{x-2}$$

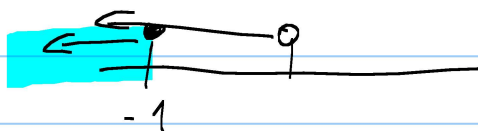
$$1. \quad x+1 \geq 0 \wedge x-2 > 0$$

$$2. \quad x+1 \leq 0 \wedge x-2 < 0$$

$$1. \quad x \geq -1 \quad \wedge \quad x > 2$$



$$2. \quad x \leq -1 \quad \wedge \quad x < 2$$



$$\text{II} \quad \frac{3}{x-2} \leq 1 \quad / -1$$

$$\frac{3}{x-2} - 1 \leq 0$$

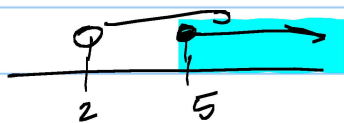
$$\frac{3-x+2}{x-2} \leq 0$$

$$\frac{5-x}{x-2} \leq 0$$

$$1. \quad 5-x \leq 0 \wedge x-2 > 0$$

$$2. \quad 5-x \geq 0 \wedge x-2 < 0$$

$$1. \quad x \geq 5 \wedge x > 2$$

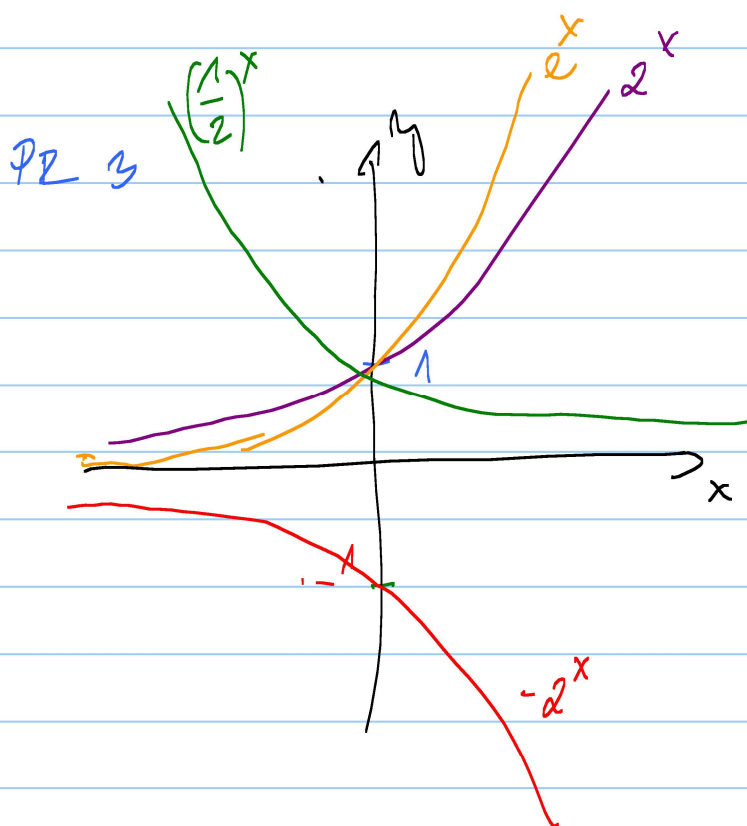


$$2. \quad x \leq 5 \wedge x < 2$$

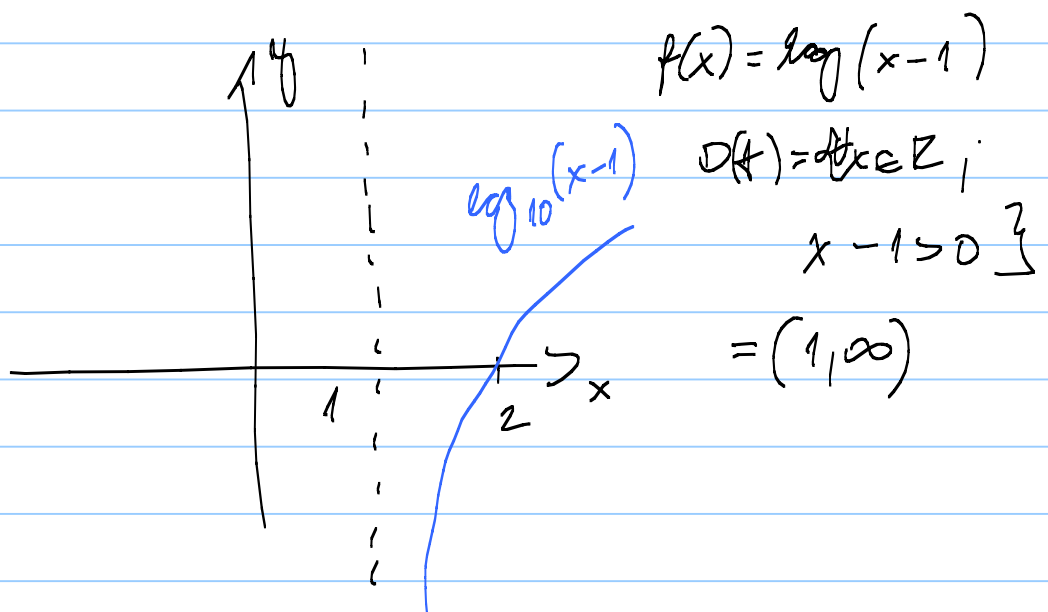
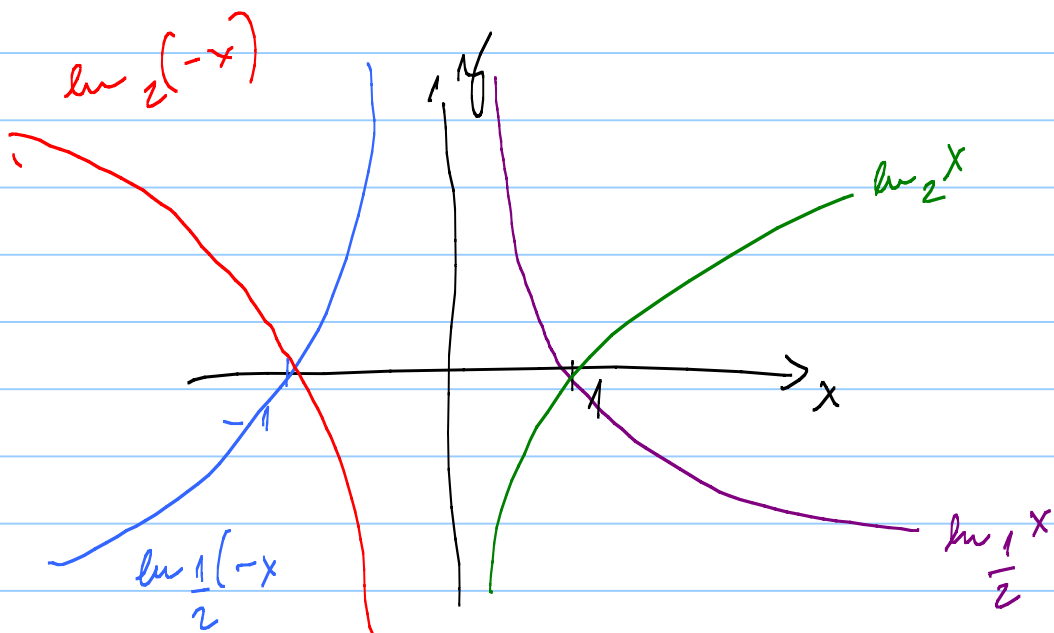
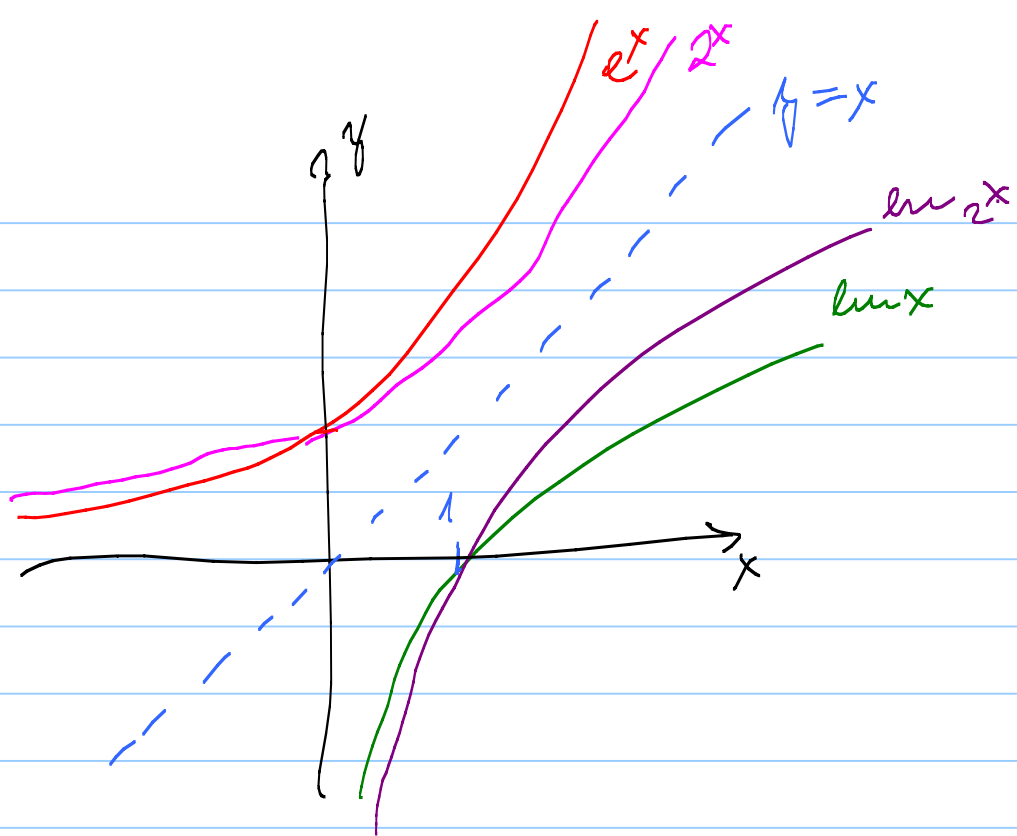


$$\mathcal{D}(f) = (-\infty, -1) \cup (5, \infty)$$

GRAFY FUNKCII



$$\left(\frac{1}{2}\right)^x = \left(2^{-1}\right)^x = 2^{-x}$$

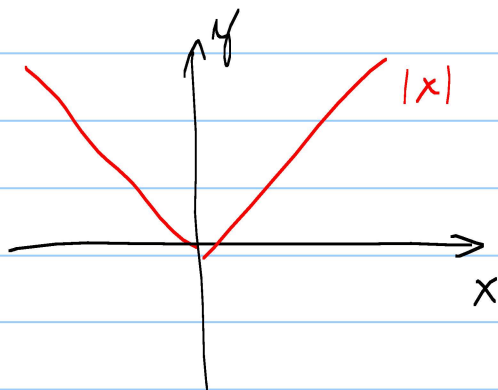


Pr 4, INWERSJA FUNKCJA:

$$f(x) = \sqrt{1 - \log_2(x-1)}$$

Pr 5,

$$f(x) = |x| \cdot \sqrt{\frac{x^2 - 4}{|4 - x^2|}}$$



$$1) \frac{x}{x} \Rightarrow x \neq 0$$

$$|4 - x^2| \neq 0$$

$$4 - x^2 \neq 0$$

$$(2-x)(2+x) \neq 0$$

$$x \neq 2 \vee x \neq -2$$

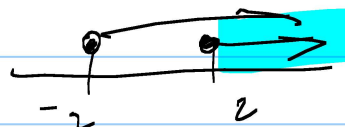
$$2) \sqrt{\frac{\quad}{\quad}} \quad \frac{\quad}{\quad} \geq 0$$

$$x^2 - 4 \geq 0 \wedge |4 - x^2| > 0$$

$$(x-2)(x+2) \geq 0$$

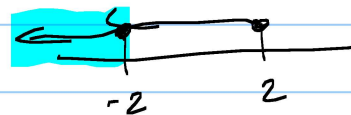
$$1, x-2 \geq 0 \wedge x+2 \geq 0$$

$$x \geq 2 \wedge x \geq -2$$



$$2. x-2 \leq 0 \wedge x+2 \leq 0$$

$$x \leq 2 \wedge x \leq -2$$



$$11. x^2 - 4 \leq 0 \wedge |4 - x^2| < 0 \text{ NIKDY}$$

NA DŁ) i

$$|4 - x^2| = x^2 - 4$$

$$\sqrt{\frac{x^2 - 4}{x^2 - 4}} = 1$$

