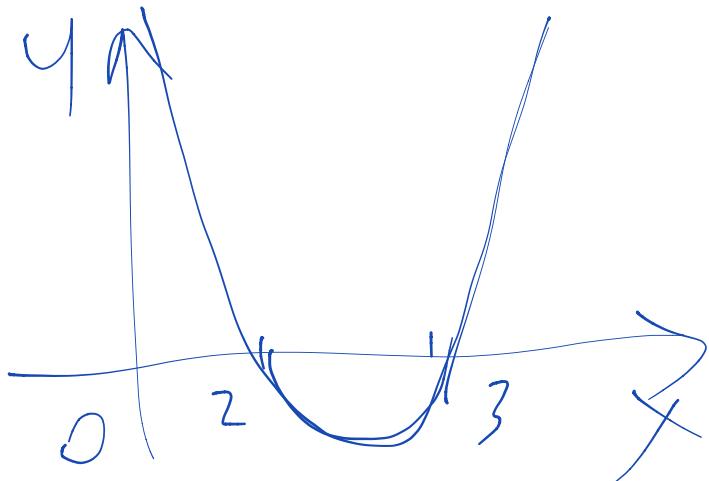


Funzioni numeriche

$$f(x) = x^2 - 5x + 6$$

$$x = 1 \quad f(1) = 1 - 5 + 6 = 2$$

$$f : x \rightarrow y$$



$$\text{Gr}(f) = \left\{ (x, y) \in \mathbb{R} \times \mathbb{R} : y = f(x) \right\}$$

I, • f. algebraiche + az. intere
 $f(x) = P(x)$

II, : f. fratta

$$f(x) = \frac{1-x}{x+3}$$

III, $\sqrt[n]{\cdot}$ f. alg. irrazionali

Dominio

$$f: \mathbb{R} \rightarrow \mathbb{R}$$

$$f(x) = \frac{1}{x} \quad D = \mathbb{R} - \{0\}$$

$$f(2) = \frac{1}{2} \quad f(0) = ?$$

$$f(x) = \frac{x+1}{x} \quad g(x) = \frac{x^2-1}{x^2-x}$$

↓

$$\mathcal{D}_f = \mathbb{R} - \{0\}$$

$$\mathcal{D}_g = \mathbb{R} - \{0, 1\}$$

$$g(x) = \frac{\cancel{(x-1)(x+1)}}{\cancel{x(x-1)}}$$

$$g(x) = \frac{x+1}{x}$$

$$f(x) = \sqrt{\frac{x-1}{x+5}} \quad \left\{ \begin{array}{l} x+5 \neq 0 \\ \frac{x-1}{x+5} \geq 0 \end{array} \right.$$

$$x < -5 \vee x \geq 1$$

$$\mathcal{D}_f = (-\infty, -5) \cup [1, +\infty)$$

$$f(x) = \sqrt{x+1} + \sqrt{x-3}$$

$$\begin{cases} x+1 \geq 0 \\ x-3 \geq 0 \end{cases} \quad \begin{cases} x \geq -1 \\ x \geq 3 \end{cases}$$

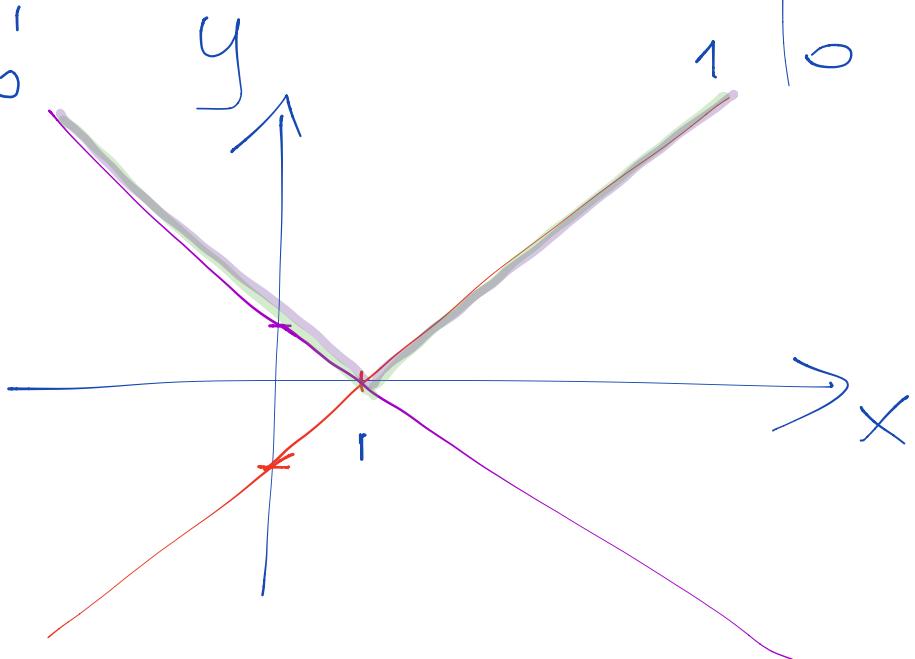
$$D_f = [3, +\infty)$$

$$f(x) = |x-1|$$

$$x-1 \geq 0 \quad ; \quad x \geq 1 \quad \text{---} \quad +$$

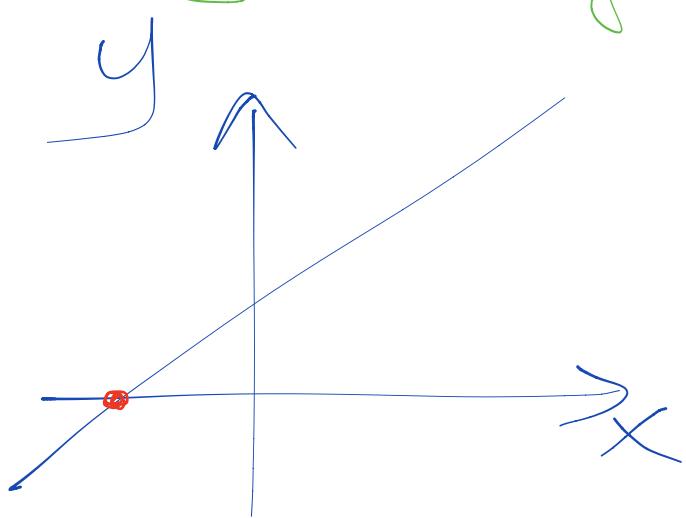
$$f(x) = \begin{cases} x-1 & \text{se } x \geq 1 \\ -x+1 & \text{se } x < 1 \end{cases}$$

x	y
0	-1
1	0



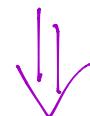
x	y
0	1
1	0

Zer e Regns



$$\left\{ \begin{array}{l} y = f(x) \\ y = 0 \end{array} \right.$$

$$y = 0$$



$$f(x) = 0$$

$$y = \frac{x-1}{x-2}$$

$$\mathcal{D}_f = \mathbb{R} - \{2\}$$

$$\frac{x-1}{x-2} = 0 \quad | \quad x = 1 \\ (1, 0)$$

$$\frac{x-1}{x-2} > 0 \quad | \quad x < 1 \vee x > 2$$

