

GRAFICI ELEMENTARI

• POLINOMI DI I GRADO

$$y = ax + b \quad (\text{rette})$$

$$f: \mathbb{R} \rightarrow \mathbb{R} \\ x \mapsto ax + b \quad a, b \in \mathbb{R}$$

• POLINOMI DI II GRADO

$$y = ax^2 + bx + c \quad (\text{parabole})$$

$$f: \mathbb{R} \rightarrow \mathbb{R} \\ x \mapsto ax^2 + bx + c$$

$$D_f = \mathbb{R}$$

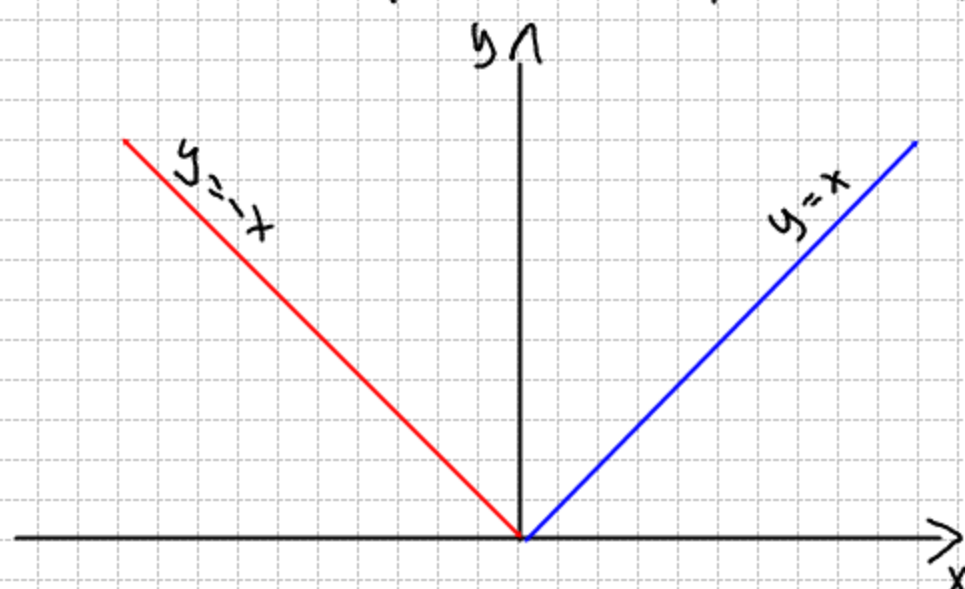
- se $a > 0$ il codominio di f è limitato inferiormente (f ha minimo)
- se $a < 0$ il codominio di f è limitato superiormente (f ha massimo)

• LA FUNZIONE VALORE ASSOLUTO

$$|x| = \begin{cases} x & \text{se } x \geq 0 \\ -x & \text{se } x < 0 \end{cases}$$

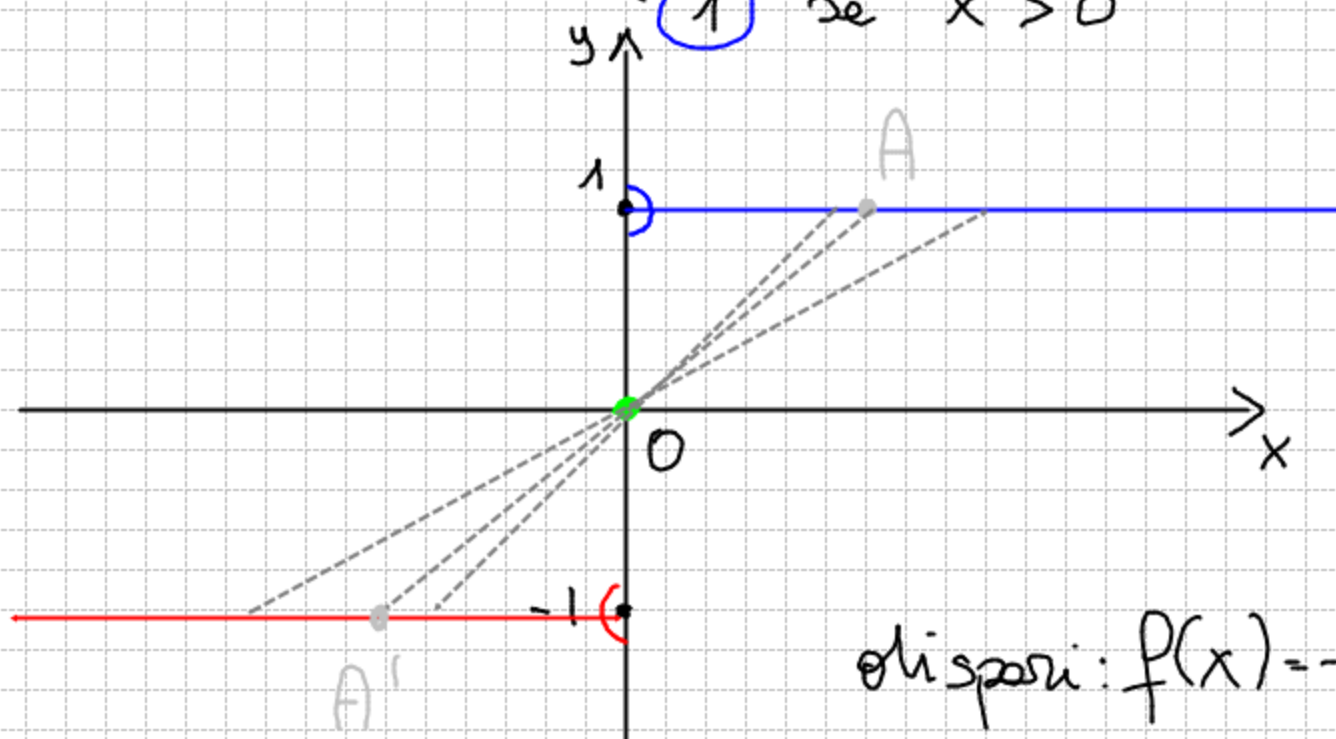
$y = |x|$ è PARI

$$f(x) = |x| \quad f: \mathbb{R} \rightarrow [0; +\infty)$$



• FUNZIONE SEGNO

$$y = \text{sgn}(x) = \begin{cases} -1 & \text{se } x < 0 \\ 0 & \text{se } x = 0 \\ 1 & \text{se } x > 0 \end{cases}$$



dispari: $f(x) = -f(-x)$

$$\text{sgn}(x) = -\text{sgn}(-x)$$

quindi $\text{sgn}(x)$ è DISPARI

$$D_{\text{sgn}} = \mathbb{R}$$

$$CD_{\text{sgn}} = \{-1; 0; 1\}$$

• FUNZIONE PARTE INTERA

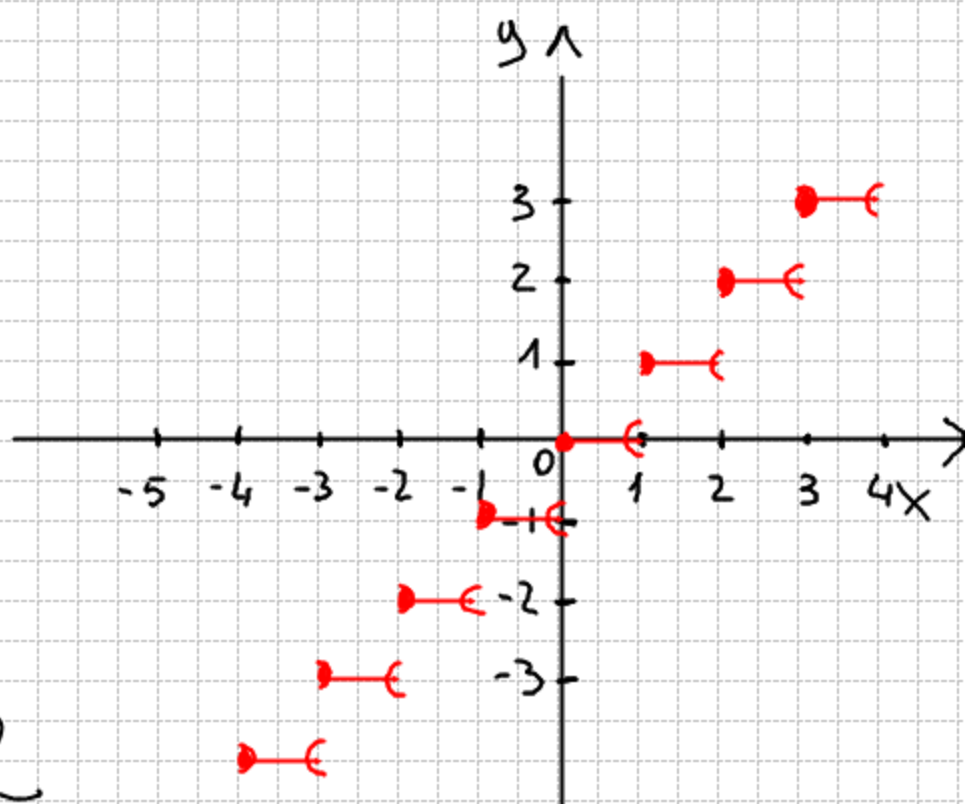
$$y = [x] \quad (\text{int}(x))$$

$$1,3 \rightarrow [1,3] = 1$$

$$7 \rightarrow [7] = 7$$

$$-0,5 \rightarrow [-0,5] = -1$$

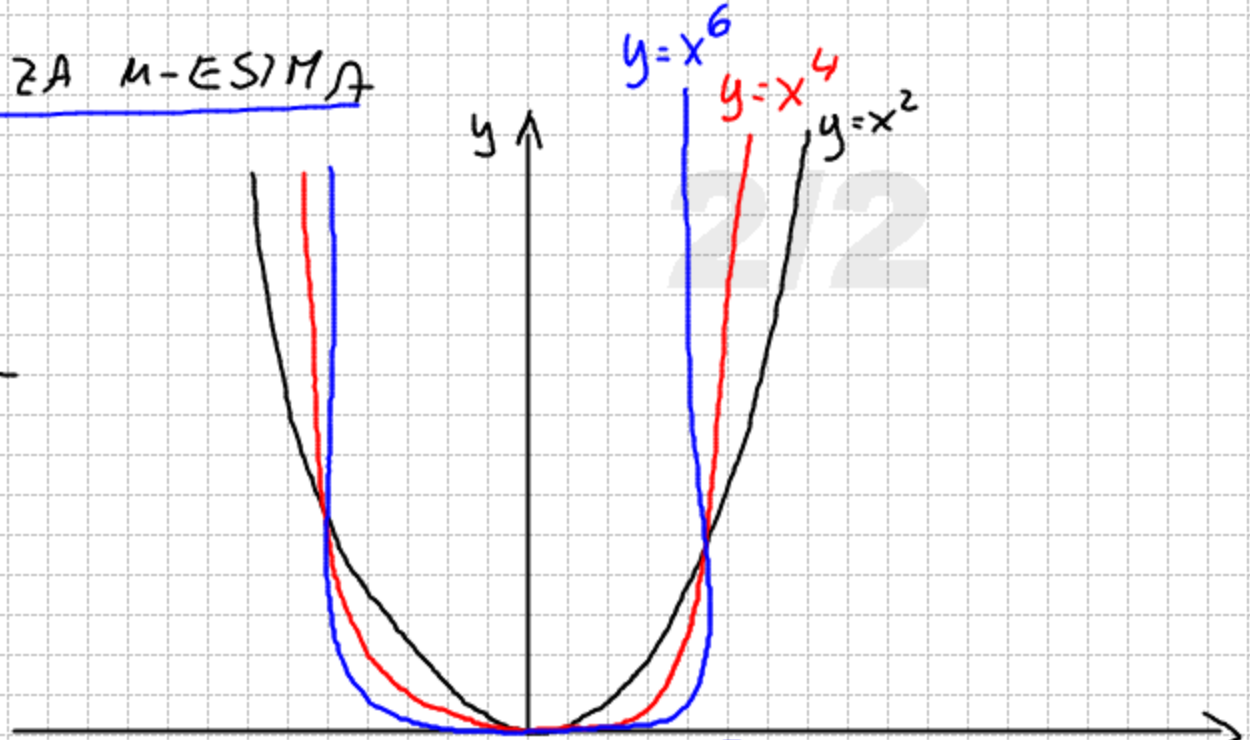
$$CD_{[x]} = \mathbb{Z} \quad D_{[x]} = \mathbb{R}$$



FUNZIONE POTENZA M-ESIMA

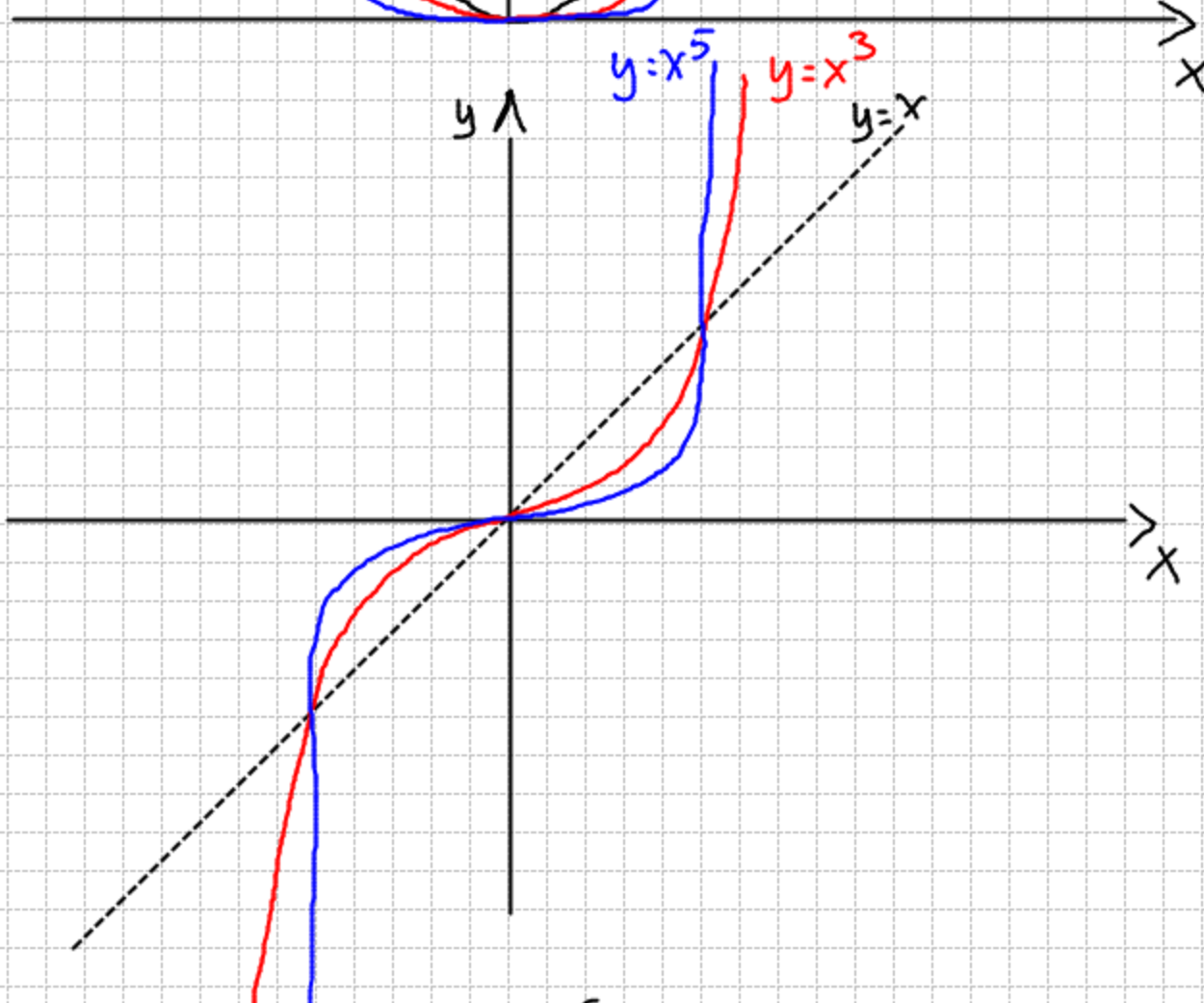
m PARI

$m = 4, 6, 8, \dots$

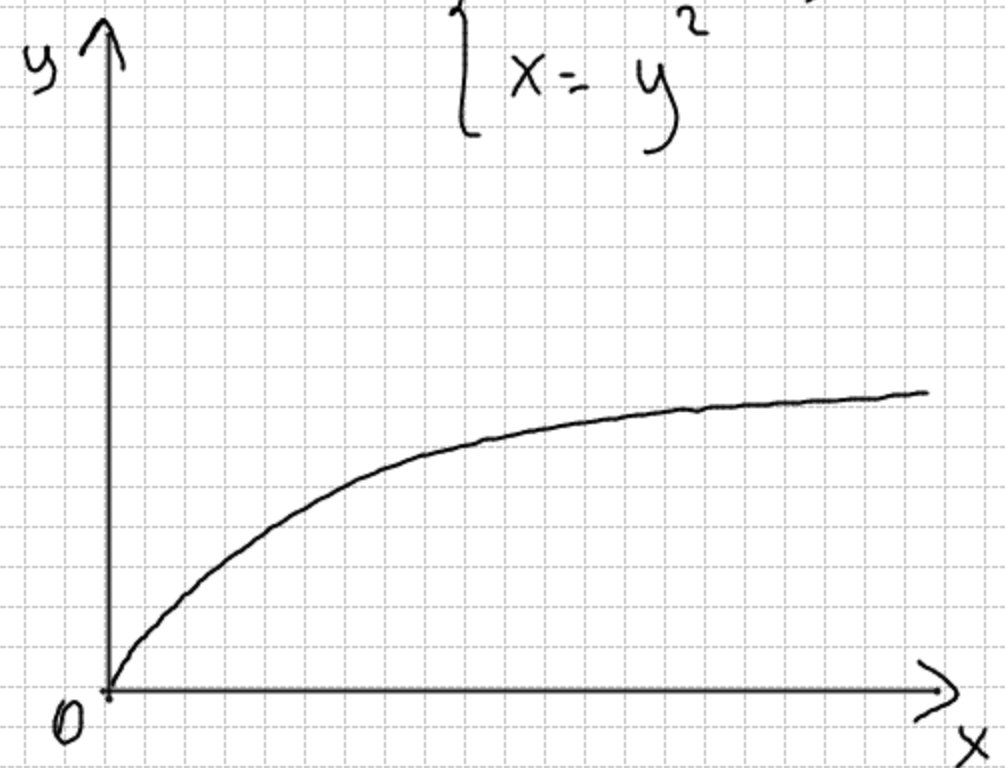


m DISPARI

$m = 3, 5, 7, \dots$



fare la funzione $y = \sqrt{x}$



$$\begin{cases} x \geq 0 \Rightarrow y \geq 0 \\ x = y^2 \end{cases}$$