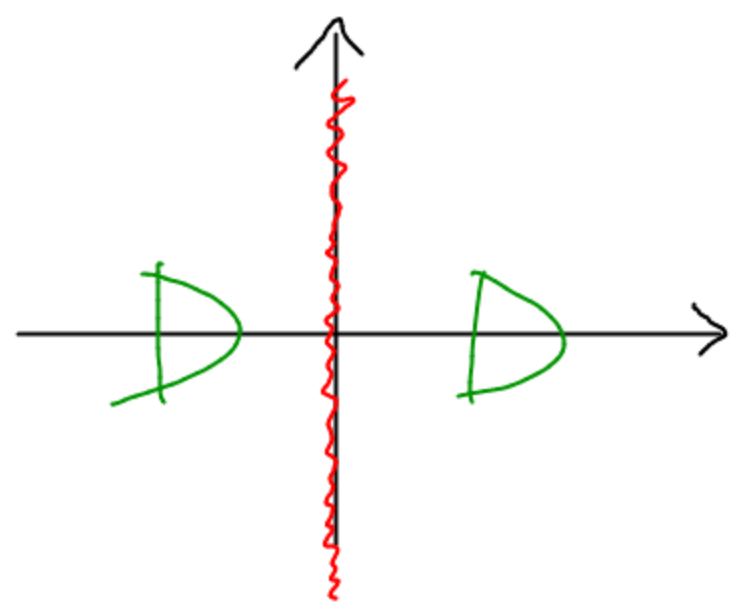


Domini di Funzioni

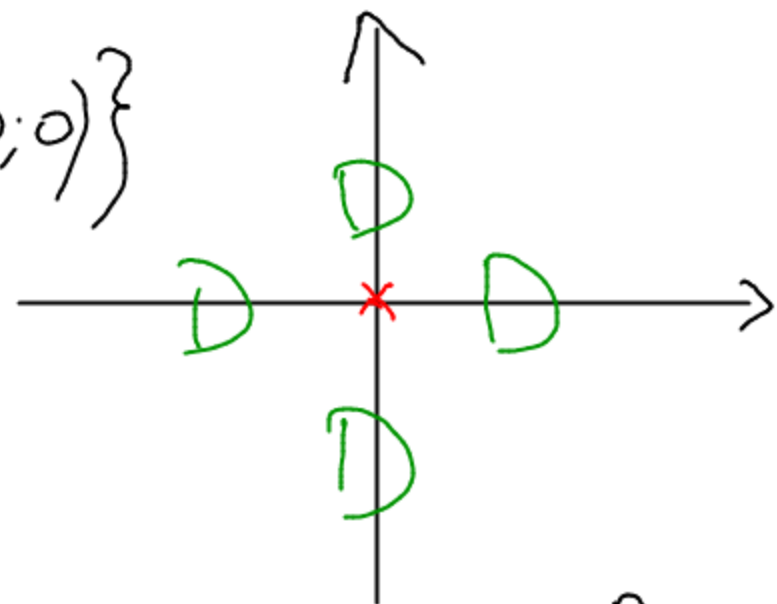
$$Z = \frac{2x^2 - y}{2x^2} \quad D = \{ \forall (x; y) \in \mathbb{R} \times \mathbb{R} : x \neq 0 \}$$

Il dominio è dato da tutto il piano cartesiano escluso l'asse y



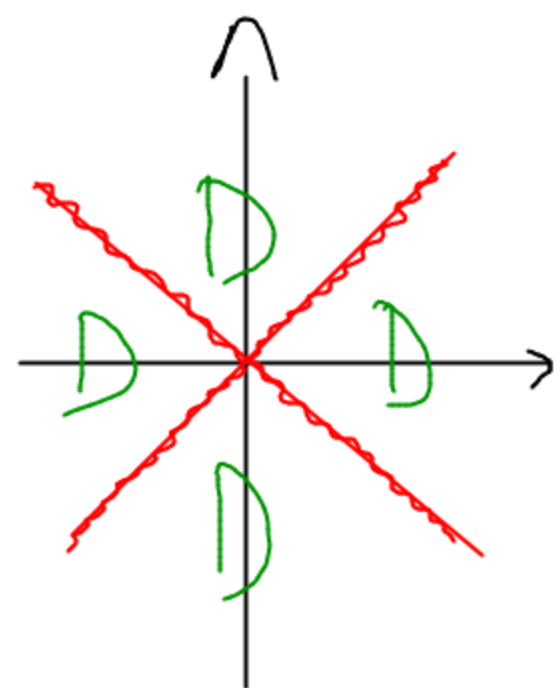
$$Z = \frac{3x^2 - 2}{x^2 + y^2} \quad D = \{ \forall (x; y) \in \mathbb{R} \times \mathbb{R} : (x; y) \neq (0; 0) \}$$

Il dominio è dato da tutto il piano cartesiano esclusa l'origine



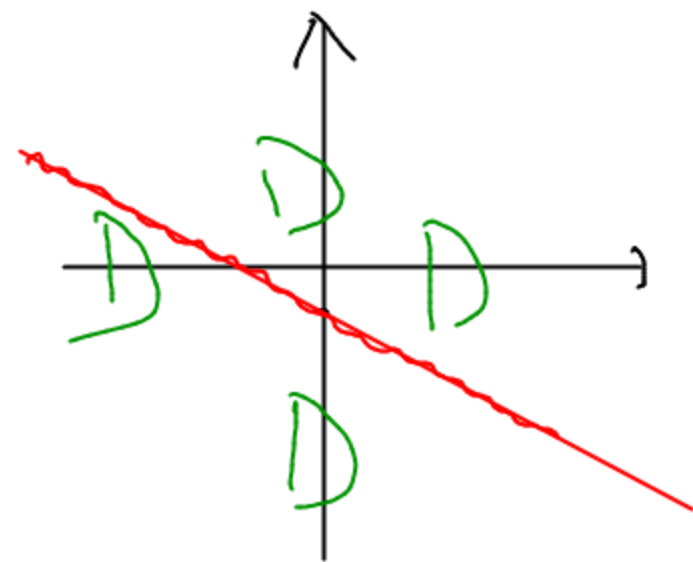
$$Z = \frac{3x^2 - 2}{(x-y)(x+y)} \quad D = \{ \forall (x; y) \in \mathbb{R} \times \mathbb{R} : y \neq -x \wedge y \neq x \}$$

(tutto il piano cartesiano escluse le due bisettrici degli assi)



$$Z = \frac{2y + 1}{x + 2y + 1} \quad D = \{ \forall (x; y) \in \mathbb{R} \times \mathbb{R} : x + 2y \neq -1 \}$$

(tutto il piano cartesiano esclusa la retta y = -1/2x - 1/2)

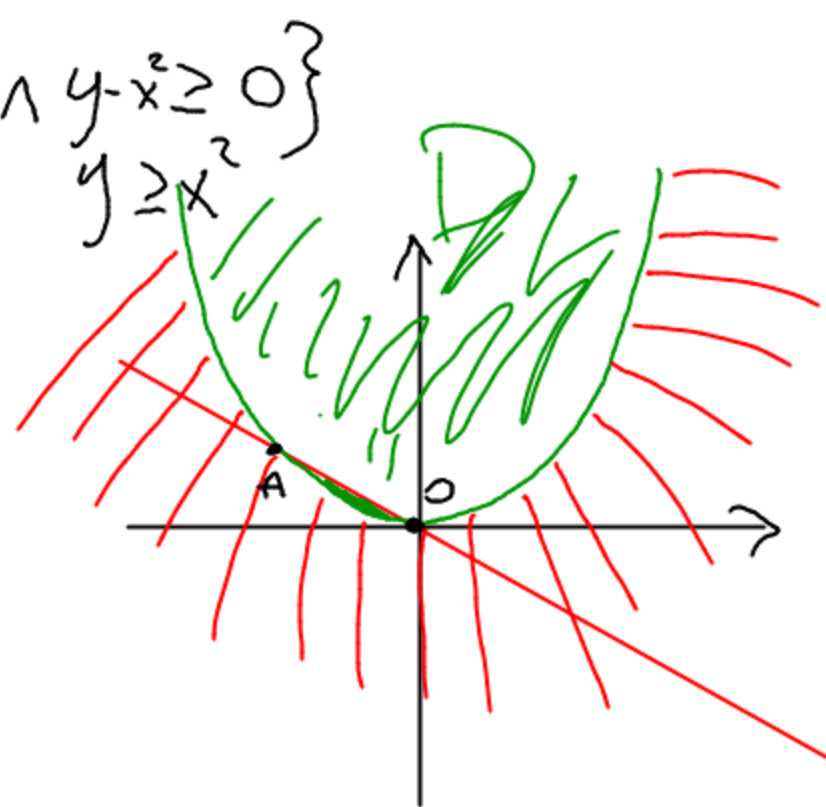


$$Z = \frac{\sqrt{y - x^2}}{3x + 5y} \quad D = \{ \forall (x; y) \in \mathbb{R} \times \mathbb{R} : y \neq -\frac{3}{5}x \wedge y - x^2 \geq 0 \}$$

Il dominio è dato dalle due zone colorate in verde

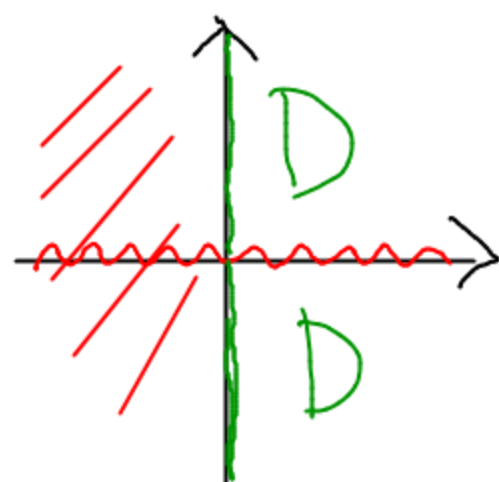
$$\begin{cases} y = -\frac{3}{5}x \\ y = x^2 \end{cases} \begin{cases} x^2 = -\frac{3}{5}x \\ \text{IDEM} \end{cases} \begin{cases} x^2 + \frac{3}{5}x = 0 \\ \text{IDEM} \end{cases}$$

$$\begin{cases} x(x + \frac{3}{5}) = 0 \\ \text{IDEM} \end{cases} \begin{cases} x = 0 \\ y = 0 \end{cases} \begin{cases} x = -\frac{3}{5} \\ y = \frac{9}{25} \end{cases} \begin{matrix} O(0;0) \\ A(-\frac{3}{5}; \frac{9}{25}) \end{matrix}$$



$$Z = \frac{\sqrt{x}}{y} \quad D = \{ \forall (x; y) \in \mathbb{R} \times \mathbb{R} : y \neq 0 \wedge x \geq 0 \}$$

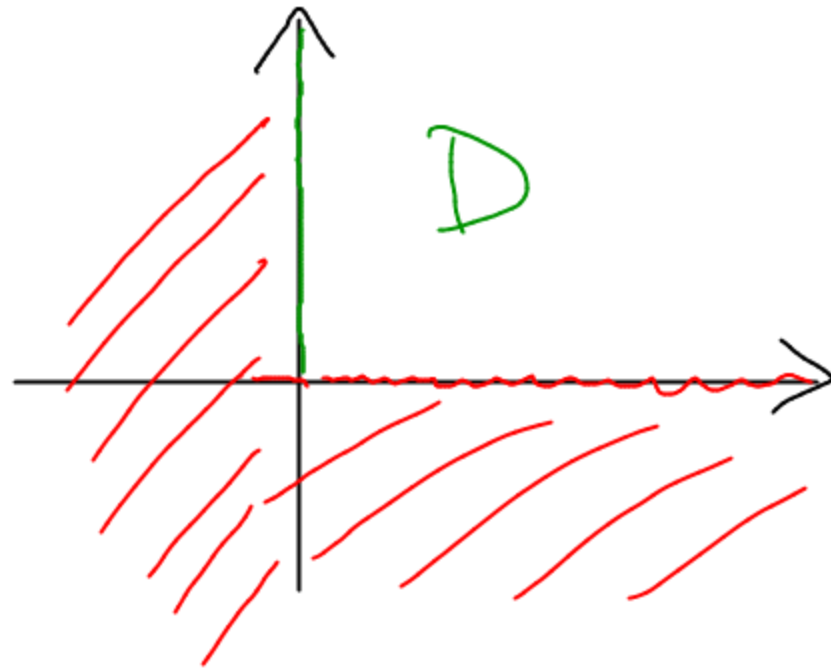
Il dominio è dato dal 1° e dal 4° quadrante escluso l'asse x



$$z = \frac{\sqrt{x}}{\sqrt{y}}$$

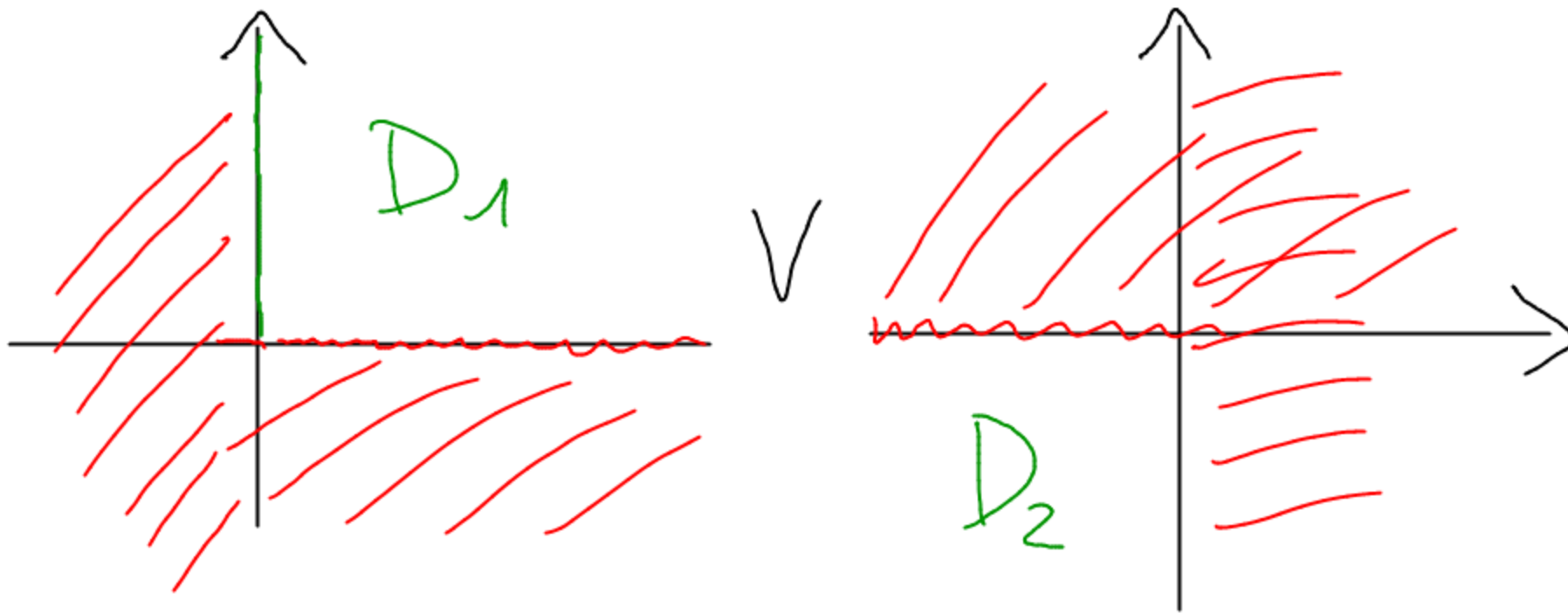
$$D = \{ \forall (x, y) \in \mathbb{R} \times \mathbb{R} : x \geq 0 \wedge y > 0 \}$$

Il dominio
è dato dal
1° quadrante
escluso l'asse x

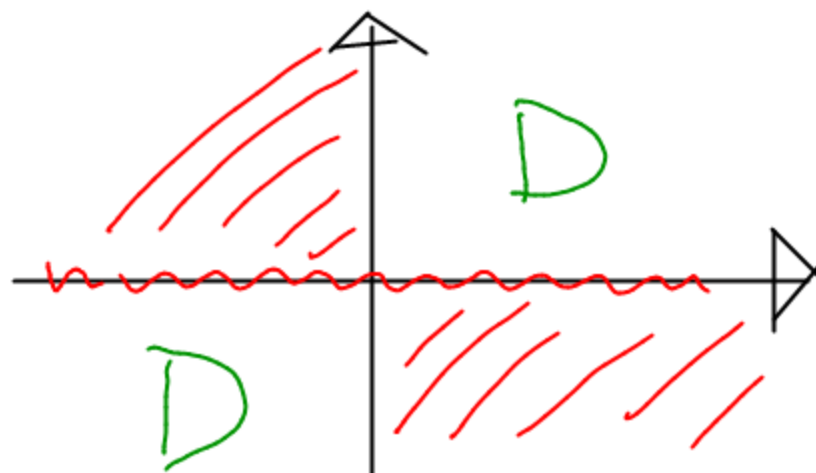


$$z = \sqrt{\frac{x}{y}}$$

$$D = \{ \forall (x, y) \in \mathbb{R} \times \mathbb{R} : \underbrace{(x \geq 0 \wedge y > 0)}_{D_1} \vee \underbrace{(x < 0 \wedge y < 0)}_{D_2} \}$$



$$D = D_1 \cup D_2$$



Il dominio è
dato dal 1° e 3°
quadrante escluso
l'asse x