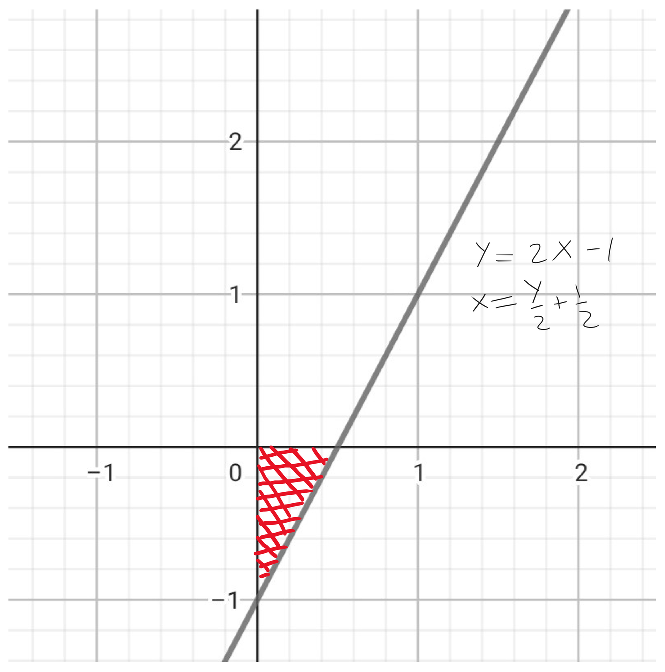
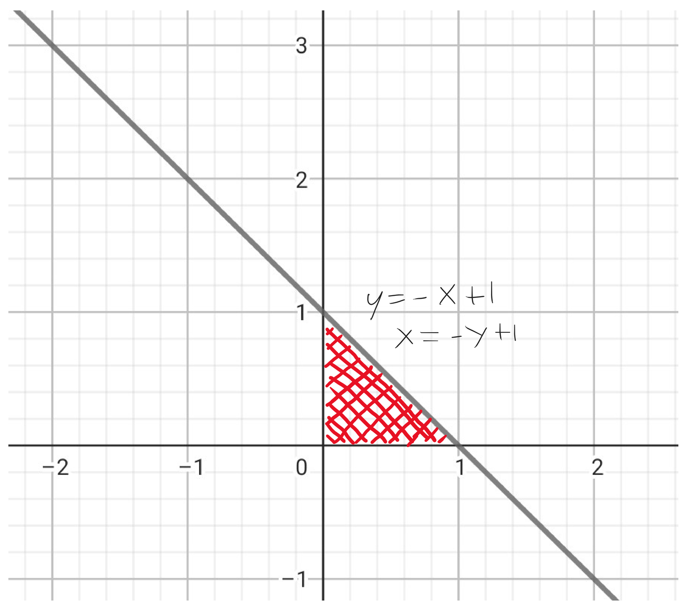


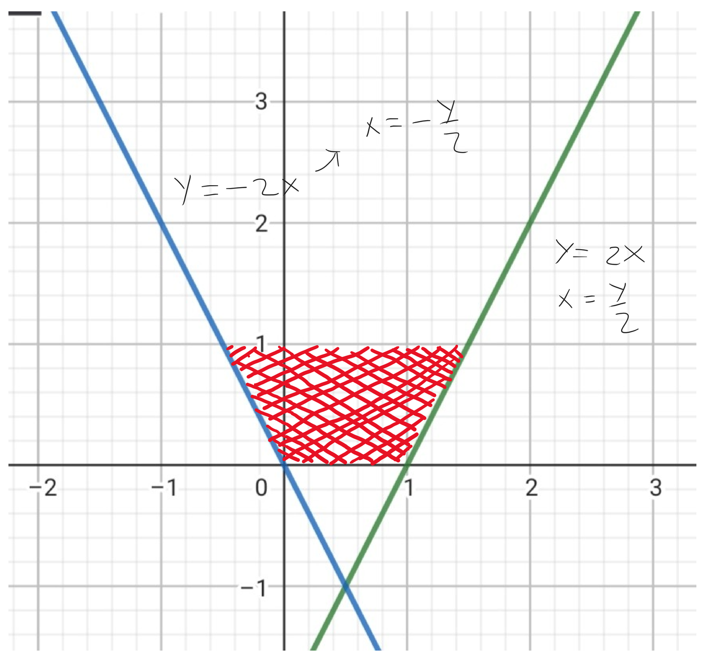
$D_1 = \{ (x,y) \in \mathbb{R}^2 \mid 0 < x < \frac{1}{2} \wedge 2x-1 < y < 0 \}$

$= \{ (x,y) \in \mathbb{R}^2 \mid -1 < y < 0 \wedge 0 < x < \frac{y}{2} + \frac{1}{2} \}$

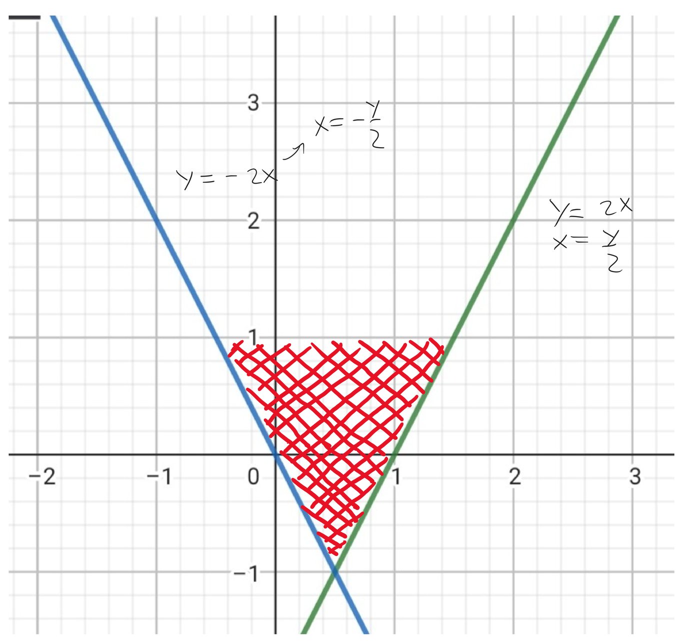


$D_2 = \{ (x,y) \in \mathbb{R}^2 \mid 0 < x < 1 \wedge 0 < y < -x+1 \}$

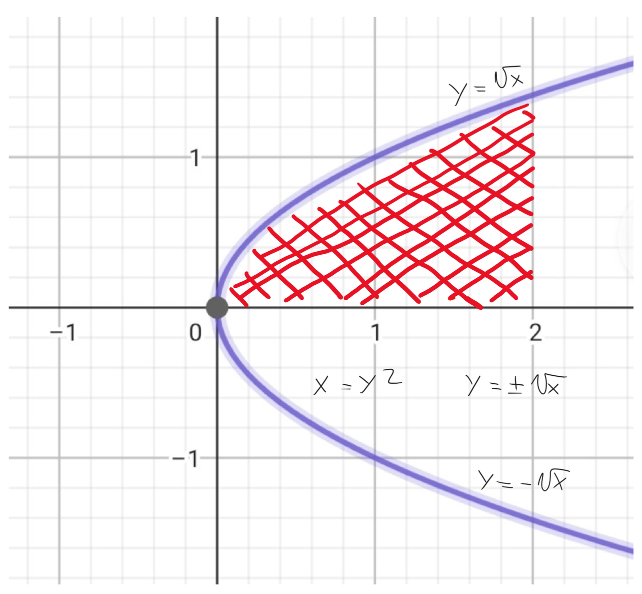
$= \{ (x,y) \in \mathbb{R}^2 \mid 0 < y < 1 \wedge 0 < x < -y+1 \}$



$D_3 = \{ (x,y) \in \mathbb{R}^2 \mid 0 < y < 1 \wedge -\frac{y}{2} < x < \frac{y}{2} \}$

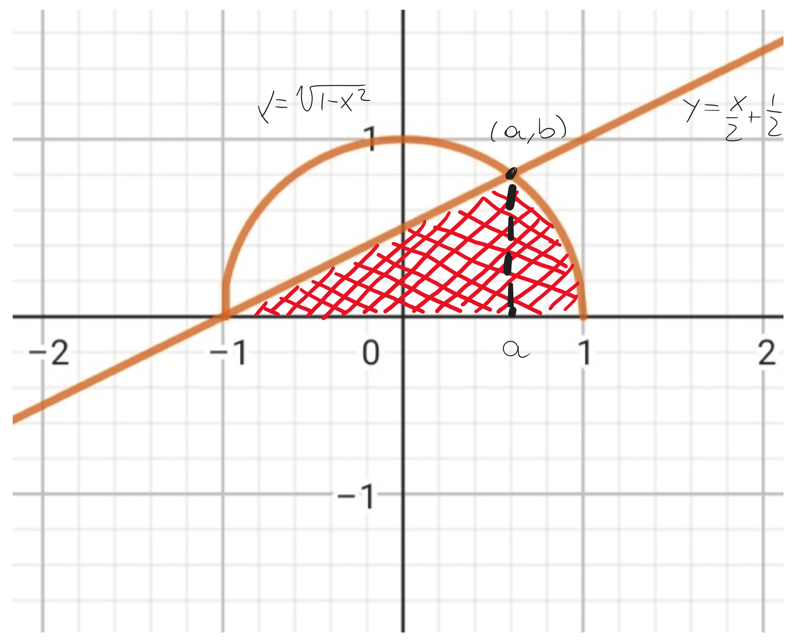


$D_4 = \{ (x,y) \in \mathbb{R}^2 \mid -1 < y < 1 \wedge -\frac{y}{2} < x < \frac{y}{2} \}$



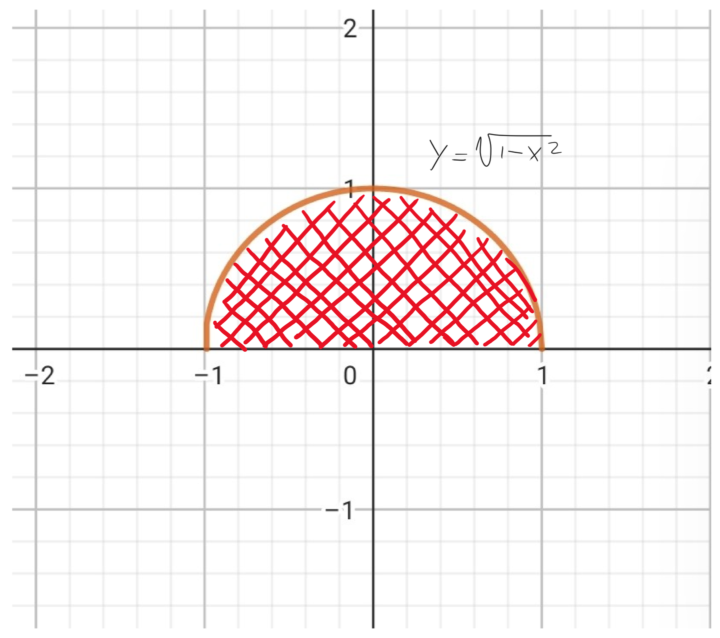
il ramo superiore è il "ramo" di parabola di equazione $y = \sqrt{x}$

$D_5 = \{ (x,y) \in \mathbb{R}^2 \mid 0 < x < 2 \wedge 0 < y < \sqrt{x} \}$

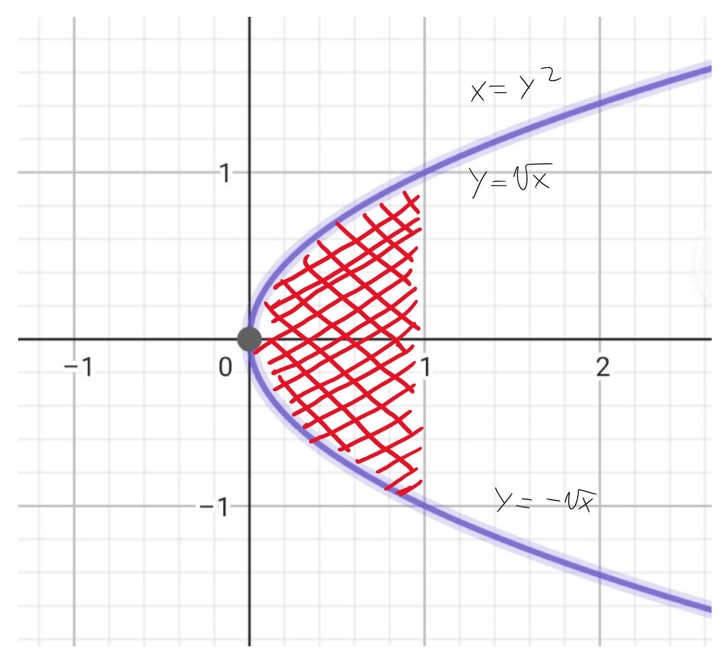


$D_6 = \{ (x,y) \in \mathbb{R}^2 \mid -1 < x < a \wedge 0 < y < \frac{x}{2} + \frac{1}{2} \}$

$\cup \{ (x,y) \in \mathbb{R}^2 \mid a < x < 1 \wedge 0 < y < \sqrt{1-x^2} \}$

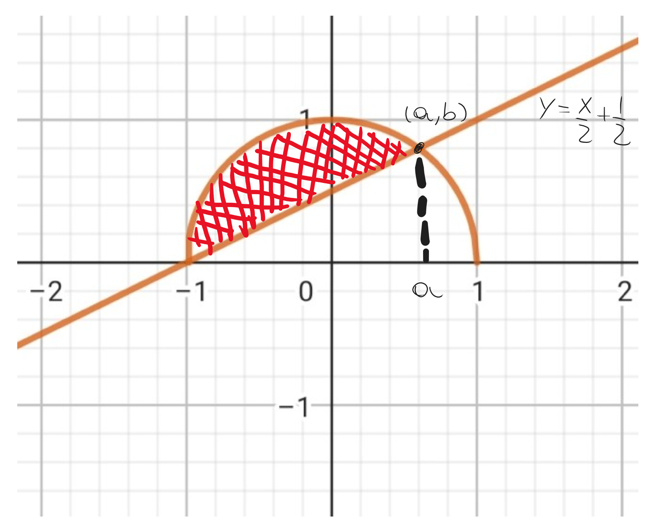


$D_7 = \{ (x,y) \in \mathbb{R}^2 \mid -1 < x < 1 \wedge 0 < y < \sqrt{1-x^2} \}$



$D_8 = \{ (x,y) \in \mathbb{R}^2 \mid -1 < y < 1 \wedge y^2 < x < 1 \} =$

$\{ (x,y) \in \mathbb{R}^2 \mid 0 < x < 1 \wedge -\sqrt{x} < y < \sqrt{x} \}$



trovo (a,b) con il sistema

$$\begin{cases} y = \sqrt{1-x^2} \\ y = \frac{x}{2} + \frac{1}{2} \end{cases}$$

$D_9 = \{ (x,y) \in \mathbb{R}^2 \mid -1 < x < a \wedge \frac{x}{2} + \frac{1}{2} < y < \sqrt{1-x^2} \}$

DEFINIZIONE:

Siano $y = \alpha(x)$, $y = \beta(x)$ due funzioni continue su un intervallo chiuso e limitato $[a,b]$ e sia

$\alpha(x) \leq \beta(x) \quad \forall x \in [a,b]$

Si dice dominio normale rispetto all'asse x un insieme del tipo:

$D = \{ (x,y) \in \mathbb{R}^2 \mid x \in [a,b], \alpha(x) \leq y \leq \beta(x) \}$

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Siano $x = \alpha(y)$, $x = \beta(x)$ due funzioni continue su un intervallo chiuso e limitato $[a,b]$ e sia

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Si dice dominio normale rispetto all'asse y un insieme del tipo:

$D = \{ (x,y) \in \mathbb{R}^2 \mid y \in [a,b], \alpha(y) \leq x \leq \beta(y) \}$